

SECRETS!

(...secrets you aren't supposed to know!)

Unusual technical books, past and present, of exceptionally high quality revealing skills and secret processes almost forgotten.

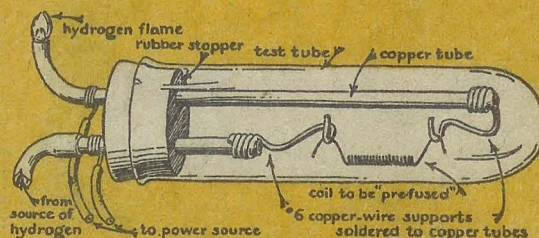
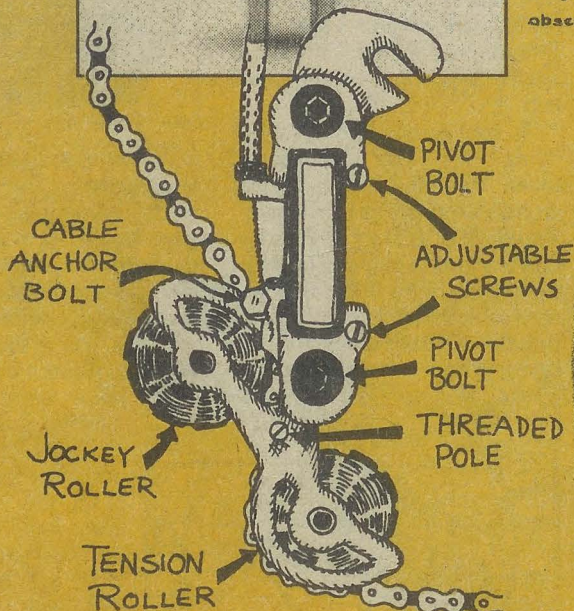
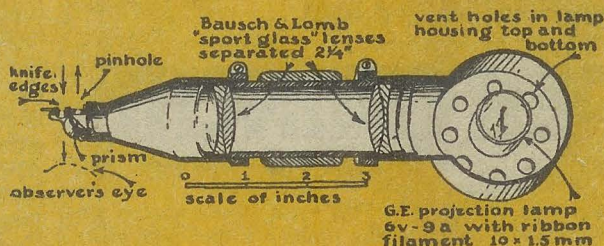


Fig. 9. Arrangement for pre-fusion of metal to tungsten coil.

(above and below) *Procedures in Experimental Physics*
(bottom) *Crystal Clear* (left) *70 Years of Radio Tubes and Valves* (bottom left) *Anybody's Bike Book*



LINDSAY PUBLICATIONS INC

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Computer Projects

For kids (and big kids like us who are learning...)

COMPUTERS

49 Science Fair Projects

by Bonnet & Keen

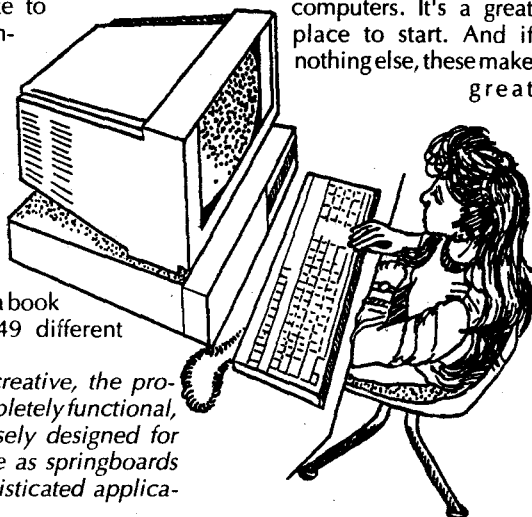
If you'd like to get your kid interested in computers or you've just picked up a machine, and don't have the slightest idea about programming in BASIC. Here's a book that delivers 49 different projects.

"Fun and creative, the programs are completely functional, yet are purposely designed for students to use as springboards for more sophisticated applications..."

You get very simple programs that deal with games of chance, aircraft design, sorting and filing

data, calculating energy costs, making mathematical conversions, calculating odds, forecasting weather, and much more.

If you're computer illiterate, get hip. This is for junior high kids, but I won't tell anyone if you use it to get started in computers. It's a great place to start. And if nothing else, these make great



science fair projects. 7 1/2 x 9 1/2 softcover 174 pages
No. 5018 \$10.95

PAPER CRUNCH!

While inflation in the U.S. is still low, prices of paper have skyrocketed. No new paper plants have been built in recent years. Environmental regulations has made plant construction extremely expensive. The U.S. economy is expanding and demanding more paper. And on top of that the drop of the value of the US Dollar against the Yen and the Mark has made the price of US goods much cheaper for other countries. What do you think they're buying? Right. Paper and pulp. Demand is sky high. Supply is limited. Prices have gone through the roof for us. We're paying for VCR's, au-

tos, and vodka with pulp. And pay we are.

This means book prices are rising rapidly. Other publishers are now increasing their prices, in some cases dramatically. We will increase ours as necessary when we reprint.

So you ask when will paper prices come down? Are you kidding? My guess is never.

In other words, book prices are never going to be cheaper than they are right now. Books that are marginal sellers will be discontinued. If you see something you want, paper prices are all the more reason to get it now.

Necessary Increase!

Because of increases in shipping rates from the postal service, UPS and others, we have been forced to change our postage and handling fees to **\$1.00 for the first book and 50¢ for each additional book.** Yeah, I know. You're gonna bellyache about it. I can't blame you. But geez, gimme a break! Believe it or not, this is the first increase I've asked for in fifteen years! I wish the money I send the postal service every year were going into my pocket. I could retire!!

The Mysteries of Air Traffic Control Revealed!

FUNDAMENTALS OF AIR TRAFFIC CONTROL

by Michael S. Nolan

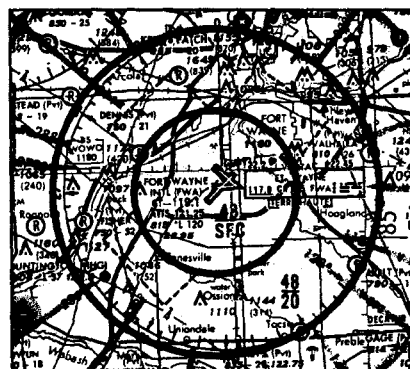
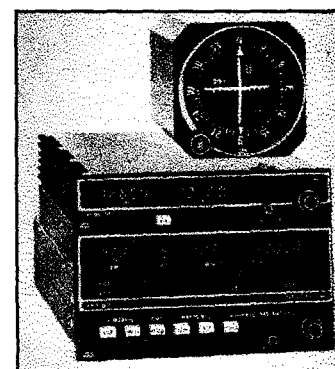
This is for aviation nuts whether you have a pilot's license or not. This is a textbook used to train controllers—those voices you can hear in the headphones on some airliners or on your scanner. It will tell you tell you the nuts-and-bolts details of how ATC works.

Chapters include history of air traffic control, navigation systems, ATC structure, airport ATC communication, ATC procedures and organization, control tower procedures, nonradar en route and terminal separation, theory and fundamentals of radar operation, radar separation, operation in the national airspace system, oceanic and international ATC, the future of the national airspace system, and the FAA.

If you're a pilot, you already know what VOR, DME, RNAV, are all about. If you have an instrument rating, you know how to shoot the localizer backcourse. But there is much that even you can learn. For instance, how do you use a MTI gate to reduce ground clutter interference on an ATC radar? You know how set the squawk on your radar transponder, but do you really know what's happening on the other end?

If you know nothing about flying or ATC, you'll be exposed to an incredibly technological world few people have ever seen. You'll see actual navigation charts should you want to shoot the ILS (instrument landing system) at Indianapolis. You'll learn how to talk to commercial airlin-

(above) plan view displays used in the ARTCCs (below) typical light aircraft RNAV system (below left) chart showing radar coverage around Ft Wayne IN airport



ers in order to maintain departure separation, even to the point of determining what their call sign should be. You get procedures, photos, charts, diagrams, tables and loads of easy-to-read text. After all, when you're done with this, you're supposed to be to control aircraft. You'll know without a doubt why flying is so safe.

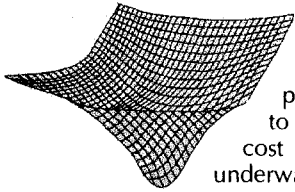
Great textbook! But not for everyone. For some of us, this is a gem: the fascinating inside story. Consider it! Top quality. 7 1/2 x 9 1/2 hardcover 558 pages
No. 5013 \$43.95

CALCULUS FOR THE MANAGERIAL, LIFE, AND SOCIAL SCIENCES

by S. T. Tan

When I discovered what algebra was all about in the seventh grade, I immediately realized how valuable math could be for the design process. When I discovered calculus, I wondered how I ever existed without it! What a miraculous tool for describing the world around us, and predicting what it will do!

This is a textbook for a one-semester course for people who are not math or science majors. You learn the basics of calculus using examples taken from business, economics, social sciences, life sciences, and more.



On page 30 there is an example problem on how to find the lowest cost route to lay an underwater cable to experimental station located

on an island. In other words, use calc to save money. I'm for that!

One page 190 an example talks about a loan officer at a bank who uses calc to decide which of 40 different mortgage plans best fit the loan applicant. He has to figure how likely his client is to have trouble paying should economic conditions change. Calc will do that.

Some of the sample problems at the end of chapter three talk about figuring concentrations of drugs in the bloodstream, cost of removing toxic waste from a well, the effect of an antibiotic, the demand for a particular wristwatch, box office receipts for a movie, and more.

Chapters include functions, limits, and derivatives; differentiation; applications of the derivative; exponential and logarithmic

WORD PROBLEMS!

How to Solve WORD PROBLEMS IN ALGEBRA

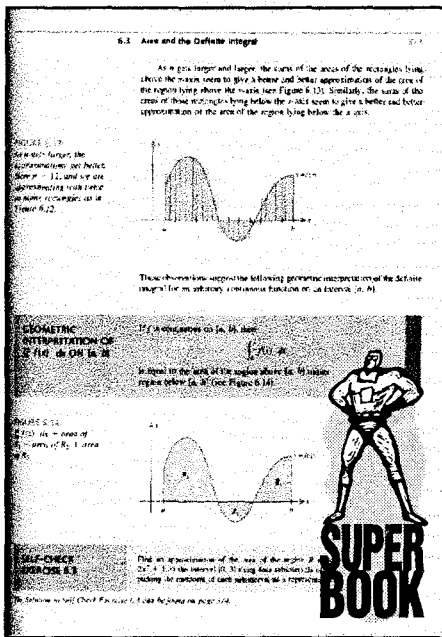
by Mildred Johnson

I cringe when I hear someone say the didn't mind math in school, but they hated story problems. That's usually when I blast them. I tell them that what they studied wasn't math, it was arithmetic. Life is a story problem, and the application of arithmetic to solve such problems is what math is all about. Any scientist or engineer will tell you that. Math is an extremely powerful tool.

If you never quite learned how to solve story problems, you should have this book. I use math in mixing chemical solutions, building radios, calculating return on investments, brewing wine, and a thousand other things.

Chapters include time, rate, and distance; mixtures; coins; age; levers; finance; work;

GREAT CALC TEXT!



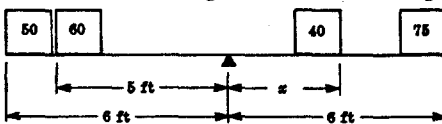
functions; integration; additional topics in integration; and calculus of several variables. All the essentials are here.

This is practical calc without the high power proofs and all the other nonsense. It's simply written, and pleasant is on the eye with lots of color used to drive home the important points. It's expensive because it's a college text (and they charge through the nose...), but it's really good. If you are really determined to learn calc and make it work, this is for you. Excellent. 8 x 10 1/2 hardcover 537+ pages

No. 5017 \$61.95

plane geometric figures; digits solutions using two unknowns; quadratics; and miscellaneous problems.

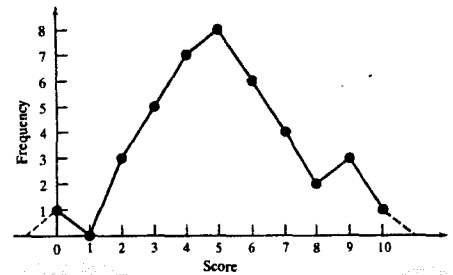
Joe can paint the barn in 5 days, and George in 8 days. They start painting but after 2 days, George is accidentally locks himself in the outhouse and can't get out. How long will take Joe to finish painting the barn? You should be able to figure this out. (Although



no one will ever quite know how George himself got locked in...)

Practical application of arithmetic to practical everyday problems. You SHOULD know this stuff. It's so useful. Get a copy. 5 1/2 x 8 softcover 166 pp

No. 5014 \$6.95



MATH REVIEW FOR ADULTS!

ARITHMETIC AND ALGEBRA ... AGAIN
by Immergut & Smith

"This book is written for all of you with unhappy memories of having to struggle with numbers at school; the flash cards in elementary school and how you prayed you wouldn't be called on..."

[This] offers you real help and real hope. It's a different kind of text, one that acknowledges the math knowledge you have already acquired and then builds on it..."

I know from experience that math is extremely useful and is also incredibly beautiful. But I also know that the way it's taught in school is about as much fun as a root canal! It's a wonder anyone learns any math at all!

Here you can learn it from scratch or review it. This is the stuff I use every day. You should, too. Chapters in Part One include: arithmetic of whole numbers, integers, decimals and percents, fractions, applications, and measurements. Part Two covers algebra: basic operations, equations and inequalities, graphing, and word problems. Part Three covers practical math: math in banking, statistics and probability.

You get here the most basic math starting with grade school level. If you don't know this but are too embarrassed to admit it to anyone, get a copy of this and learn. It's written for adults who deal with the real world, not kids. You'll pick it up in a hurry. Which is larger 0.245 or 0.268? If bell metal is composed of 4/5 copper and 1/5 tin, how much of each of these metals is there in a church bell that weighs 87/100 of a ton? Which is a better buy: four 8.5 fl oz cans of juice for \$1.99 -or- a 2 liter jug for the same price?

Algebra uses equations to solve for unknowns. For instance, find three consecutive numbers whose sum is 24. If the price of a radio was \$28.09 after an 8.25% sales tax was added, what was the price of the clock?

In the last section you learn to use your skills to figure mortgages and loans. Statistics will allow you to understand a lot of information you get in the news.

You get easy-to-understand text, lots of practical problems (with answers), and practical applications. Great basic math book for adults. If this something you want to learn, get a copy. 8x11 softcover 379 pages

No. 5015 \$14.95

GET YOUR BIKE AND YOUR BUTT IN GEAR!

ANYBODY'S BIKE BOOK
An Original Manual of Bicycle Repairs
by Tom Cuthbertson

"The classic manual for owners and buyers of one-speed, three-speed, and ten-speed bikes has been newly revised with special attention to mountain bikes. There have been many innovations in bikes in recent years, but [this] remains the standard guide for riders of any style bike. Immensely readable and clearly illustrated it shows the do-it-yourselfer how to find the problem fast and fix it.

• tools • brakes • handlebars • stem • headset • powertrain • wheels • seat • fork • frame..."

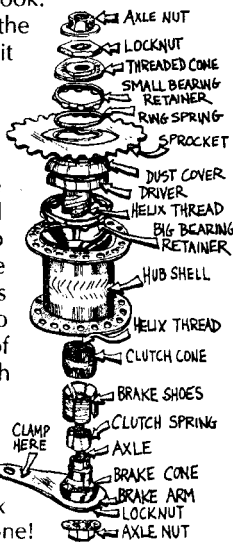
This is a classic since 1971 with the most recent copyright being 1990. Now, you, THE master mechanic, doesn't have to admit he can't fix his wife's bicycle for her. Just read the book.

(Better yet, give her the book and let her fix it herself while you open a bottle of homebrewed stout!)

This book will keep your bicycle moving, steering and stopping. It might also make you look the mechanical genius you want everyone to think you are! One of my girlfriends had such a big butt, she had me replace her bicycle seat with a pizza pan! Now if I only knew how to fix the flat tires.... Get one! 6x9 softcover 236 pages

No. 2019

\$9.95



SUPER BOOK

When you see this symbol near a book, remember that this is a very expensive book of top quality that we may not stock for very long. In fact, we won't keep too many copies on hand at any time. Don't be surprised if we have to backorder a copy for you.



PROCEDURES IN EXPERIMENTAL PHYSICS

by John Strong
reprinted by Lindsay Publications

If you consider yourself an experimenter, an inventor, or a builder of unusual machines and equipment, you must have a copy of this fantastic classic text. No two ways about it.

You'll find wall-to-wall practical how-to and incredible illustrations on almost every one of the more than 600 pages. Chapters include: laboratory glass blowing, laboratory optical work, technique of high vacuum, coating of surfaces by evaporation and sputtering, the use of fused silica, electrometers and electroscopes, Geiger counters, vacuum thermopiles and the measurement of radiant energy, optics, photoelectric cells and amplifiers, photography in the lab, heat and high temperature, notes on the materials of research, notes on the construction and design of instruments and apparatus, and molding and casting.

This is some incredible stuff! Learn how to blow glass and make aspirators, distillation condensers, and so on. Learn how to seal copper to glass so that you can imbed electrodes. Learn how to rough cut lens blanks from large plates of glass and then grind them into lenses on your homebuilt lens grinder.

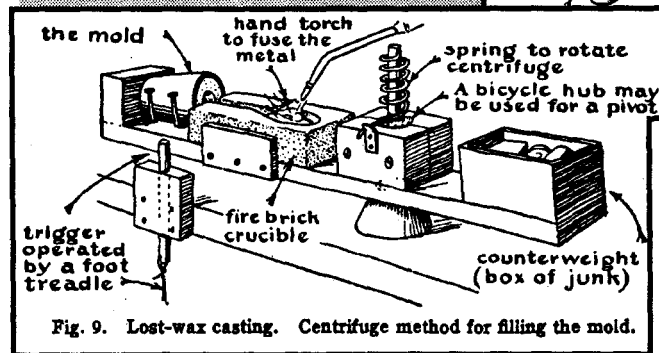


Fig. 9. Lost-wax casting. Centrifuge method for filling the mold.

Learn how to make a parabolic telescope mirror using the standard techniques. Learn to make unusual equipment to test the finished mirror. Learn how to grind a Schmidt lens.

Build high vacuum roughing pumps, getters for creating the highest vacuums, diffusion pumps using mercury and oil and much more. Silver mirrors, even with aluminum! Manipulate fused quartz strands to build a microbalance sensitive down to a billionth of a gram per division! And there's so much more!

Build a Compton adjustable quadrant electrometer, a Hoffman electrometer, and others useful for x-ray and cosmic ray work. Build a Geiger counter. You can build your own Geiger-Mueller tube if you master the high-vacuum technique taught earlier. Unfortunately, most of the electronics described is based on vacuum tubes of fifty years ago rather than on transistors.

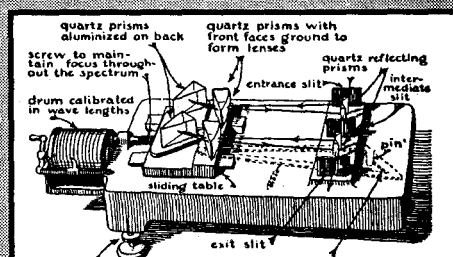
Build vacuum thermopiles that measure

Procedures in EXPERIMENTAL PHYSICS

Wall-to-Wall How-to! Classic Text! Incredible Illustrations!

infrared, visible light and ultraviolet so accurately that they can be used to calibrate photographic lightmeters and such. You've heard of carbon arc lights, but do you know how to build iron arc lights? Or low pressure mercury arc lights? And others? You can even build a machine to measure the wavelength of colored light.

You'll find details on hydrogen furnaces, crucibles, burners, electric arc furnaces, and even a lab setup for making artificial rubies



This cam sliding on the pin rotates the rear prism table maintaining minimum deviation throughout the spectrum. All the slits are separately adjustable. The entrance and exit slits are curved to compensate for prismatic distortion.

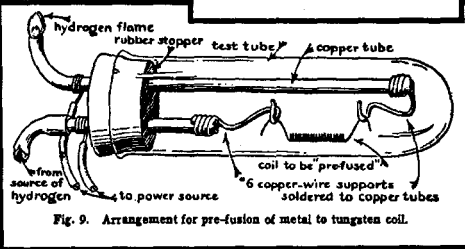
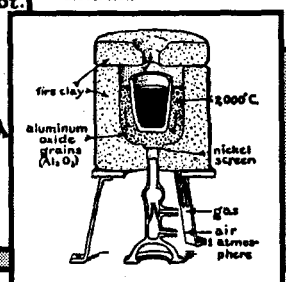


Fig. 9. Arrangement for pre-fusion of metal to tungsten coil.

and sapphires! And there's much more - even down to what we consider the "easy stuff" like using a lathe and sand casting.

This is a fantastic book loaded with construction secrets for unusual equipment that you should have. First published in 1938, this baby went through a couple of dozen printings! It's a classic. It's incredible. You should have a copy for reference if nothing else. Highly recommended. Order a copy today. 5 1/2 x 8 1/2 sewn softcover 642 pages

No. 4562

\$24.95

Incredibly Readable PHYSICS TEXT!

It almost reads like a magazine!

FROM ALCHEMY TO QUARKS

by Sheldon L. Glashow

What a book! This is a mixture of science, history, and showmanship. It's just plain fun if you're curious about the world around you. And if you're not curious then why are reading THIS catalog?

This book "is addressed to the student who has not studied physical science or mathematics in depth. He or she must be conversant with algebra and have studied high-school chemistry or physics..."

Just about anywhere you open the book you'll find something fascinating. He starts out with a brief history of time, how the days of the week got their names, how we measure time, length and on and on. Did you know in Thailand the unit of measure is the Nin and .0212 meter in length? That we buy oil in 42 gallon barrels and wine in 31.5 gallon barrels?

How about a short history of ther-



If I had a tongue like this, I could rule the world!

a particle, yet act like a wave. Glashow tells us that Schrodinger slipped away in 1925 to write leaving his wife in Vienna. But the first thing he wrote was a letter to one of his old girlfriends in Vienna. She joined him. We don't exactly know who she was or what she was doing, but over the next twelve months Schrodinger cranked out an amazing series of scientific papers. The world of physics had never seen so many fresh, earth-shaking ideas come out of one man in such a short period of time. She must have been one helluva woman! (And you thought science was cut and dried!)

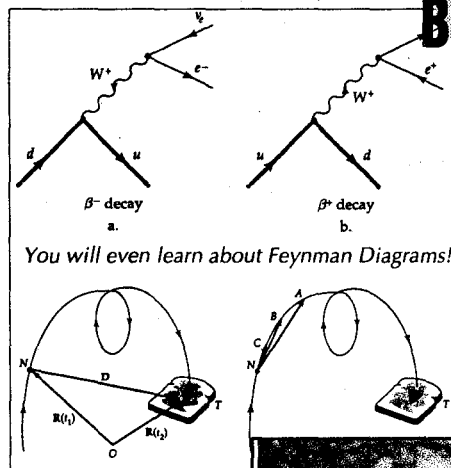
This is a physics course for non-scientists. And it IS fun. You get all the standard material: motion, energy and momentum, behavior of gases, heat, atoms and elements, electricity, magnetism, waves, quantum mechanics, the world according to Einstein, inside the nucleus, elementary particles, and the standard model.

Physics is a study of the way the world works. This is a fun way to learn about basic principles that will help you understand why engines work, why certain elements combine only with other elements, why you can't have electricity flowing without magnetism, or how clocks can be set using the star. You'll also see that crazy nuclear physicist, Niehls Bohr, blasting down the road on his motorcycle with some babe!

I'll say it again. Great book. Expensive. Of course. This is a standard text at Harvard University. But you really get your money's worth. I love it. Or can't you tell? 7 1/2 x 9 1/2 hardcover 692 pages

No. 5010

\$59.95



You will even learn about Feynman Diagrams!

mometers, phlogiston, genealogy of the Bernoulli family, or how chemists came to believe in atoms? Do you remember a TV program years ago with James Burke called Connections? This book reminds me of that. This is popular history, real physics (yes, with problems), gossip and all kinds of fun things.

I'm fascinated by Erwin Schrodinger's equation which shows the wave function of an object moving in response to a force, in other words, it tells us how a photon can be



Niehls Bohr dirt biking in a suit!

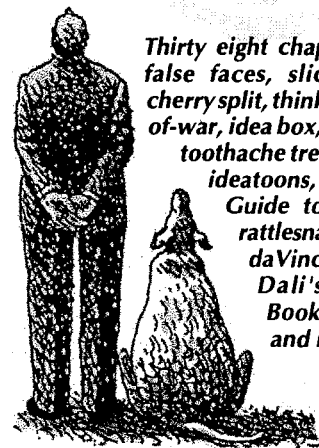
THINKERTOYS

by Michael Michalko

I haven't read all of this yet, but what I've read is great. Every human bean (or is it being?) has a tendency to get into predictable ruts, especially in his thinking. Tell someone something, and they're likely to believe it. They never question it. So how creative do you think these people are? Right. Zip.

People think I'm really creative on one hand, but get really upset with me because I question what they believe and almost everything they say. This book will teach you valuable techniques for looking at the world, throwing out the accepted BS, and ask "What's really happening here?". When you do that, you're well on your way toward being creative.

ThinkerToys



Thirty eight chapters include: false faces, slice and dice, cherriesplit, think bubbles, tug-of-war, idea box, idea grid, the toothache tree, future fruit, ideatoons, Worrywillie's Guide to Prioritizing, rattlesnakes and roses, daVinci's technique, Dali's technique, Book of the Dead, and much more!

"In hindsight, every great idea seems obvious. But how can you be the person who comes up with those ideas? THINKERTOYS makes it easier with over 30 meticulously outlined techniques, and hundreds of hints, tricks, tips, and tales to turn anyone into a startlingly creative thinker..."

[It] will teach you to generate ideas for new businesses, new products, product extensions, new markets, and new sales techniques..."



Creativity and the courage to act on it is the difference between being a leader or a follower, between being a success or a failure, or between being looked up to or down upon. Which are you going to be?

I know from experience that creative people make the world go around. Ask Tom Edison. Get hot! Get a copy of this and be a winner. I gotta go read some more of this... 7 1/2 x 9 softcover 335 pages

No. 5016

\$17.95

BEAT THE COPS

by Alex Carroll

From the back cover:

"Buy this book. It can save you a lot of money.

You will learn •how cops cheat on tickets to fill quotas... •how you can speed legally... •why you will probably never have to pay a photo radar ticket again... •how you can schedule a trial during an officer's vacation... •the name of an organization that will pay for your ticket... •why the safest speed on most roads is currently 10-15 mph faster than the speed limit... •how you can sneak by the new laser guns... •and much, much more."

T'aint no fun getting traffic tickets. And Carroll claims you can beat them. The backcover also says "Alex Carroll is an expert on tickets. In the past 10

BEAT THE COPS!

years he has helped hundreds of people fight their tickets. He has also nullified 10 tickets of his own. After spending countless hours in traffic courts..." What? Ten tickets? Countless hours? Has this guy got a death wish or what?

If you're as big a traffic hot dog as the author, then you already know this stuff. But if you're like the rest of us, you get ticketed once in a blue moon. When you do, you'll realize that this book is much cheaper than a sharp lawyer and higher insurance rates. Order a couple of copies for your teenage son!

Unusual. The kind of book you hope you'll never need. Consider it. 5 1/2 x 8 1/2 paperback 120 pages Cat. no. 6067

\$9.95

BUYING A CAR?

How to Stick It to the Dealer

BUYING YOUR NEXT CAR

How to Stick It to the Dealer Before the Dealer Can Stick It to You

by J Michel White

"New or used, purchased or leased, here's an easy-to-use, step-by-step guide for winning the car-buying game. You'll learn how to: level the playing field, develop your own game plan, and win a fair deal on your own terms.

This indispensable book provides you with the all-important answers to questions like: How much does the dealer really pay for a car? How much can I really get for my trade-in? How do I know I'm getting the best deal? How can I turn the dealer's tricks to my advantage? Can I really afford the car I want? Should I consider leasing my next car?"

Gonna buy another car? Get hip! Do a better job this time negotiating for the best price, whether buying new or used. Or for that matter, even if you intend to buy a worn-out hulk or a confiscated luxury car at a government auction. The tips are here.

The author started out buying a '48 Plymouth when he was 15 years old, and has since owned more than 170 cars?! Needless to say, he has been a super car salesman, and he knows the tricks. Here, he'll teach them to you.

Get hip. Get a copy. The money you save could buy you a copy of every book in this catalog! We'd both like that! 5 1/2 x 8 1/2 paperback 138 pages

Cat. no. 493

\$8.95

HOW TO REPAIR BRIGGS & STRATTON ENGINES 2ND ED

by Paul Dempsey

With this book and some scrounging you can recycle old Briggs & Stratton engines. Or you can keep your lawnmower going just one more year. Or build an emergency power plant. Or...

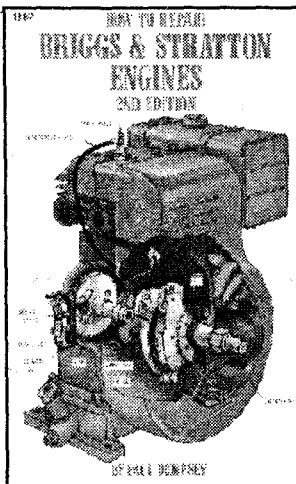
Chapters include: basics, ignition, carburetors, governors, starters, charging systems, and total rebuilding. This book is loaded with practical how-to: adjustments, troubleshooting, assembly diagrams, charts, hints and tips and all the rest.

B&S engines are common. It seems that you should be able to pick up junkers and combine the parts to get running engines at little cost. Good basic repair book. Get a copy. 5 1/2 x 8 1/2 paperback 190 pages

Cat. No. 1265

\$11.95

FIX ENGINES



Detail Your Car!

Get it really clean!

DETAILING CARS & TRUCKS

by do-it-right publishing

This is "a mini-course for the do-it-yourselfer who wants to learn how to do it right."

This is a picture book that will show you how to professionally clean, and I mean really clean, your car. Chapters include the detailing process, detailing products, automotive hand wash, the two-bucket wash, paint detailing, trim detailing, convertible top detailing, tire and wheel detailing, interior detailing, underhood detailing, truck chassis detailing, the 15 minute quick wash, and the one-step cleaner-wax job.

One testimonial on the backcover says "I saved at least \$150 detailing my car at home, and I did it in just one Saturday afternoon." I'll believe that. I want you to learn today, so you can clean my car next Saturday. (I hate washing cars. Loading the dishwasher is about all I can handle and grudgingly at that...)

You spent a fortune on that pile of tin. Make it look like something. Get this book, and find out how to make it really shine! 5 1/2 x 8 1/2 softcover 180 pages wall-to-wall photos

No. 6079

\$8.95



Vacuum Form PLASTICS!

"...simple forming for about \$15.00 or less..."

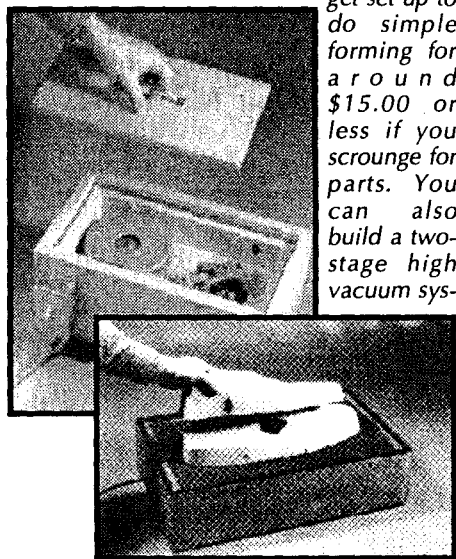
DO IT YOURSELF VACUUM FORMING by Douglas E Walsh

The author wrote me:

"I tried the obvious way first, as I'm sure many others have by using a kitchen oven and shop vacuum cleaner. The results were OK, but limited to simple parts in thin plastics. The oven part works fine but the vacuum cleaner just didn't provide enough vacuum.... Real vacuum pumps cost hundreds of dollars..."

I thought about it some more and came up with eight other sources for vacuum, most of which are inexpensive and one is totally free! I was then able to combine a vacuum cleaner with a cheap source of higher vacuum. This gave me that magic combination of high vacuum and high flow necessary for serious forming.

This easy-to-read book shows you how to get set up to do simple forming for a round \$15.00 or less if you scrounge for parts. You can also build a two-stage high vacuum sys-



tem for \$50-\$60 that can form up to 1/4" thick plastics...."

You can produce magnetic signs, parts for models, and all kinds of things if you use your imagination. You can put this simple, but powerful mass-production technique to work for you because you don't have to spend a fortune on equipment.

Chapters include the basics, heat sources, vacuum sources, forming equipment, plastics, molds, forming and finishing. You get straight forward to-the-point how-to with plenty of photos and drawings.

Possible money maker! Fun to try. Here's an excellent book by a man who has done it, and explains it clearly. Get a copy! 5 1/2 x 8 1/2 booklet-style spine 128 pages Cat. no. 1308 \$9.95

Incredible Astronomy Text! Loaded with color photos! Details! Secrets!

ASTRONOMY

The Cosmic Journey

by Hartman and Impey

Another great book! You start out just as early man might have wondering what the heavens are all about. Then you start exploring - first the closer bodies and then further and further away.

You get eight parts: the early discoveries, exploring space with gravity and light, exploring the earth-moon system, the solar system, the stars and their evolution, environment and groupings of stars, galaxies, and frontiers.

This is unbelievably fascinating because of great illustrations and clear explanations. You avoid that garbage you might read in the newspaper which is often riddled with mistakes and is overly simplified. Here you get all the

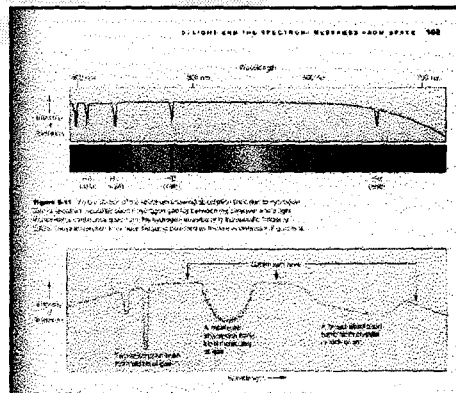


Figure 8-1: The spectrum of light from a star. The spectrum shows a continuous range of colors from violet to red, with various absorption lines.

276. EXPLORING THE EARTH-MOON SYSTEM

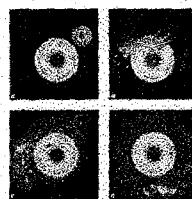


Figure 8-2: The phases of the moon. The diagram shows the moon's position relative to the Earth and the Sun, illustrating the different phases.

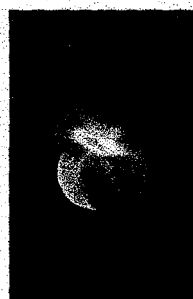


Figure 8-3: The Earth's horizon as seen from space. The horizon is a dark line, and the sky is a deep blue color.

Molecules, Crystals, and Absorption Bands

Much of the phenomena seen in molecules and crystals is due to the absorption of light. The absorption of light is a process in which the energy of the light is transferred to the molecules or crystals, causing them to vibrate or move.

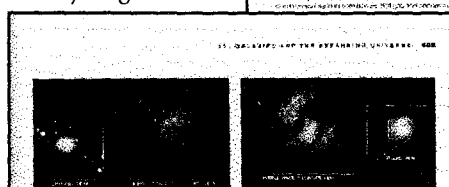


Figure 8-4: The phases of the moon. The diagram shows the moon's position relative to the Earth and the Sun, illustrating the different phases.



Figure 8-5: A person looking up at the sky. The person is wearing a hat and a long coat. The sky is dark and cloudy.



Figure 8-6: A person looking up at the sky. The person is wearing a hat and a long coat. The sky is dark and cloudy.

detail that couldn't be covered in a TV documentary. In other words, you details that you just won't easily find anywhere else as told to you by two expert scientists. You're getting inside information.

Get a great introduction to absorption spectroscopy, interferometry with the Very Large Array, Coriolis drift, and much more. You the latest findings, details and theories about the planets and their moons, meteorites, stars, black holes, and much, much more. You'll see NASA photographs and paintings, many of which will be new to you.

When I saw Carl Sagan's Cosmos series I always wondered how do we know these things? This book answers so many of my questions. It provides so much more meat that you'll ever find in a month of Sundays digging through your local library.

You get all kinds of things. Like a kinematic plot (velocity vs radius) of the galaxy NGC3115. Like the basic equations that describe Hubble's Law and the Age of Universe. Like an incredible chart that shows the chances that we'll get blown away by an asteroid like the dinosaurs did.

This is a college textbook, but this looks more like an incredible magazine without advertisements. It's something you read for pleasure. You get sucked into it.

Oh! And you might like that series of photos showing tons of borosilicate glass chunks being heated in a gigantic rotating oven until the whole thing melted into one huge blank that could be ground into a 6.5 meter telescope mirror!

There's a world out there you haven't even begun to sample. This book will expose you to just a piece of it. Get started. If astronomy interests you at all, this is a book you really enjoy. Steep in price, but does it ever deliver! 8x10 hardcover 728 pages color photos throughout No. 5011 \$48.95



Homesteading & Survival



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SHELTERS, SHACKS AND SHANTIES!

SHELTERS, SHACKS AND SHANTIES
by D. C. Beard

D C Beard wrote *American Boy's Handy Book* in 1882, and it became a classic. It has been reprinted and has appeared in the pages of this catalog. In 1908 Beard helped found the Boy Scouts of America.

In 1914 Beard produced this well-illustrated and thoroughly entertaining book for boys of all ages (that includes you and me). Now we can shut off our computers and VCRs and learn how to build sod houses, over-water camps, railroad tie shacks (I can smell the creosote...), Navajo hogans, and log cabins. And Beard will teach use how to use an axe, build a fireplace, lay a fire and much more.

Fun book! Useful. One of these shanties could be a great place to store your mother-in-law when she feels compelled to visit. Get a copy. Reasonably priced. I think you'll like it. 5 1/2 x 8 1/2 softcover 243 pages
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How to Have a Great Retirement on a Limited Budget

Diane Warner

HOW TO HAVE A GREAT RETIREMENT ON A LIMITED BUDGET

by Diane Warner

"If you're looking for dull, dry financial advice for planning your golden years, you won't find it here. This book includes only practical, proven ways to enjoy a full, fun retirement - without emptying your bank account!

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This book is going to become more and more valuable as inevitable Social Security cuts hit us. If you're retired, this is valuable now. If you're like the rest of us who realize that Social Security will never fund our retirement (at least not completely), this book is quite useful now, and more so when we come eye-to-eye with the possibility of old-age poverty. In other words, this is something to look at NOW. A reassuring book. 7x9 softcover 145 pages
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A Problem Solving Manual
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by Robert S. Wood

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HOW TO...make quick repairs to packs, boots, tents, beds and stoves...choose and develop a campsite for maximum comfort

and shelter...deal with emergencies, storms and other difficulties... treat blisters, hypothermia, sunburn, bleeding, elevation sickness, etc.... keep snug, dry, comfortable and warm in heavy weather.

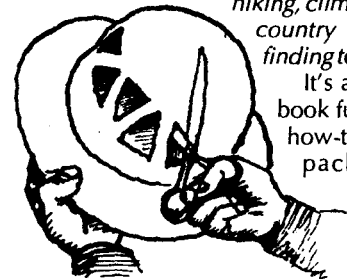
PLUS TIPS ON fire building, cooking, water treatment, getting found when lost, hiking, climbing, cross-country and route-finding techniques."

It's a great little book full of useful how-to for backpacking and camping. It's small enough that it

would easily fit in the glove-box of your car for emergency use. Good stuff. Get one. 4 x 6 1/2 softcover 128 pages

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by M. G. Kainb

Tell the boss to hang it, and move to the open country and homestead! It's possible. This reprint of the 1935 original will show you as it did thousands during the Depression how to survive comfortably on five acres. You'll learn about greenhouses, coldframes, soil, manure, fertilizers, compost, tools, weeds, orchards, pruning, grafting, seeds, transplanting, berries, things to sell every day, grapes, storage, and much more. There's so much info here at such a low price, you can't afford not to have a copy. 397 pages
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Homestead!

Tell the Boss to Shove It!





Homesteading & Survival

WINDMOTORS

by F. E. Powell
reprinted by
Lindsay Publications

Put the wind to work with one of these turn-of-the-century designs.

You'll learn about different types of windmills, some of them unusual. Then you'll be shown how to build a model tower windmill similar to those in Holland.

Chapter 3 will show you how to build a real power-producing windmill with three foot diameter sails. It may be a small windmotor, but it can drive a small dynamo. You

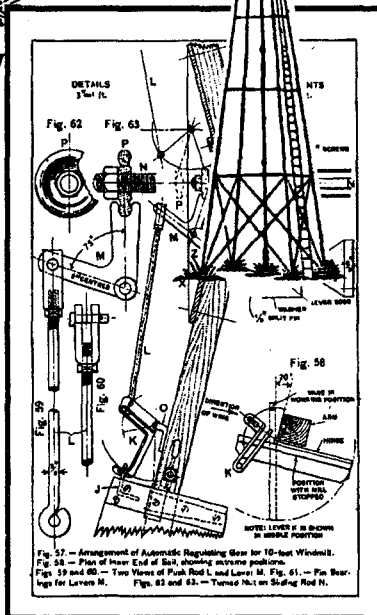


Fig. 57 - Arrangement of Automatic Regulating Gear for 10-foot Windmill.
Fig. 58 - Plan of lower End of Sail, showing extreme positions.
Fig. 59 and 60 - Two Views of Push Rod L and Lever M. Fig. 61 - Pin Gear.
Fig. 62 and 63 - Turned Nut on Sliding Rod N.
Fig. 64 and 65 - Turned Nut on Sliding Rod N.

WINDMOTORS

get all the important design details.

In Chapter 4 you are shown how to build a 6 foot diameter windmill capable of driving a 30 watt dynamo at 16 mph. You'll see many detailed drawings showing how the all-wood machine is built, and how metal gearing brings the power down to ground level.

Another chapter reveals a 10 foot diameter windmotor. The last chapter gives you tips on generating electricity—high tech in 1910! Obviously better generators are available now, but the basic principles still apply, and the control methods still work.

I think you'll enjoy this book. These mills may not be as hot as modern designs, but building one of these babies should be relatively easy and low-cost. You get great designs from a simpler time when simpler materials were used to get surprisingly good performance.

A really nice little book to have. Low cost. Get a copy.

5 1/2 x 8 1/2 softcover 88 pages well-illustrated

No. 4279

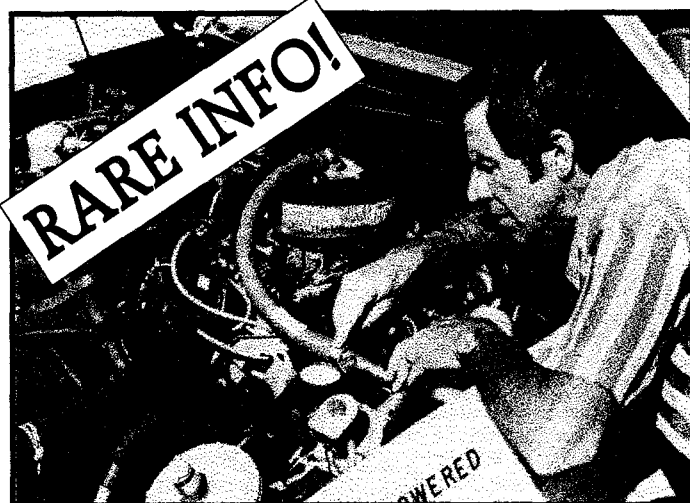
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Dear Sir:

I am impressed with your expedient service... After several attempts to order by phone, I followed the catalog's advice and tried by fax. I placed my order and within two days or so, the order was on my doorstep (priority mail). I was quite pleasantly surprised with the promptness of your service. I am also enjoying the quality books you offer! Thank you.

Ted Kersten, San Luis Obispo CA



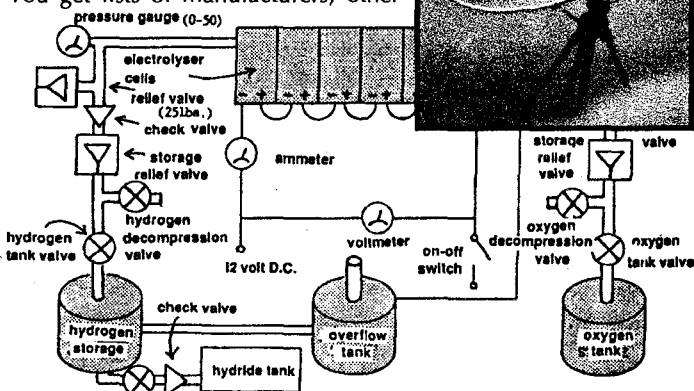
FUEL FROM WATER

Energy Independence with Hydrogen

FUEL FROM WATER

by Michael A. Peavey

Here's the best book of its type that I've seen yet. You'll read about hydrogen generators, storage devices, modifications of autos for using hydrogen fuel, the hydrogen homestead and more. You get lists of manufacturers, other



books, and sources of additional information.

Chapters include electrolysis production of hydrogen, chemical hydrogen production, fuel from trash, storing hydrogen, engine modifications, electricity from hydrogen, stationary applications, safety and the hydrogen economy.

You get both practical how-to and lots of commercial how-to that might be too expensive or difficult for you to use. But even the high end equipment will offer ideas that you might be able to use.

Hydrogen can be useful not

only for powering automobiles and other engines, but it can be used to store energy generated by windmills. Why store electricity in lead-acid cells if you just want to heat your house? Burn the hydrogen in a motor-generator unit to convert it back to electricity when needed. These are some ideas to consider.

Excellent book. Great theory. Great ideas. Loads of useful illustrations. We've sold countless copies of this book over the years. Rare information. Get a copy. I think you'll like it. 8 1/2 x 11 softcover 250 pages

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ART OF KISSING

by William Cane

A book on kissing? Who needs a book on kissing? You do!

Look. I don't care how great you think you are as a lover, you can use all the help you can get. One of my girl friends asked me where I learned to make love. The obvious answer was "the same place I learned to do everything else I do: from a book." Then she told me that there must have been

chapters missing! When it comes to kissing, don't let that happen to you.

Listen, fish lips, it's about time you learned what it is you're supposed to know. The author supposedly got thousands of calls and letter from readers of the first edition. This new

Kiss your way into the record books!

version now includes: "The kinds of kisses men and women like most (and least!), according to the results of the world's first Internet kissing survey. • How to overcome your kissing shyness and kissing anxieties. • More lips-on instruction and wisdom from real kissers on how to perfect the first kiss, the eye kiss, the nose kiss, the neck kiss, the public kiss, and wet kiss..." and much more.

I have mixed feelings about this. It's a great book about kissing. And it's inexpensive. But, geez, what could this book teach me that my dog can't? 'Course maybe that's why I don't have many girlfriends...

It's for real. Get a copy of it. Use it. Give it away. Good book. I just wish it came with a dipolma I could hang on the wall. 5x7 softcover 180 pages

No. 779

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Meet the right people!

FRIENDS AND LOVERS

How to Meet the People You Want to Meet

by Bhaerman & McMillan

The pressure is on to meet people, right? WRONG! There's too much emphasis today on meeting people and not enough on simply having fun and that's why most of the singles bar/singles get-togethers and "can't miss" methods fail miserably. "When you're being yourself and really having fun, you can't help but radiate confidence, enthusiasm - and attractiveness," say the authors, who help you:

- zero in on your favorite things to do, then translate those interests into a personal action plan of activities you can do with others
- keep from getting discouraged while you're finding that perfect match of interests and ambitions
- "grow your own fun" instead of waiting for it to come to you - with five ideas that are just crazy enough to work

You'll even find a list of rapport makers, ideas for graceful exits and extending or declining invitations, and other ways to turn awkward situations into comfortable ones.

"This book made me realize that I had been approaching meeting women in a haphazard and some-

what romanticized way. The idea that I could take charge of my 'social agenda' was a revelation. I'm amazed that such an obvious, simple idea should have eluded me all these years. They ought to teach this in school" - 35-year-old single man

Good book! Now I know why my



"why don't cha come over and see my Tesla coil shoot sparks?" line never seems to work. I've been looking for love in the wrong part of the high voltage lab! I know better now. If you have a tough time meeting the people who are right for you, this book can help. Much of it is common sense. And we need to be reminded of these basics as well as learn new ideas. Order a copy. 6x9 softcover 202 pages no pictures (dirty or otherwise)

No. 780

\$10.95

HOW TO FLIRT A Practical Guide

by Marty Westerman

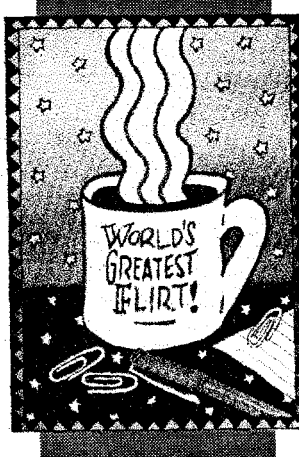
Fun book. Cute book. Accurate book. People are always looking for some new way to have fun in life. If you're fun, they will want to be a part of your life, too.

Welcome to a lost art Dr. Flirt (a.k.a. Marty Westerman) has dragged out of the dark ages, not to mention dark bars. So get ready to throw away lines like "Hey, what's a nice girl like you..." (you know the rest).

A great flirt isn't the stud with a fast line; it's the child with a smile that melts your heart. You are a terrific flirt when you tickle a baby or serve as a perfect host anytime you are yourself. Flirting isn't about hunting. It's about enjoying life and people and letting them know it. Flirting is stress free.

So, let the flirt out in you! Dr. Flirt helps out with revealing flirt Qs & As, flirting exercises and a complete list of proven flirting techniques. He lets you in on some flirt psychology and a list of the world's greatest

FLIRT 'TIL YOU DROP!



flirts, including Adam and Eve (pre-apple, that is). To top it off, Westerman tells you how to deal with success and rejection and shares with you his own "7 Rules of Flirting" worth the price of the book alone.

So, take this book to heart and pack away those tired old lines but feel free to use "coochie, coochie, coo" it works everytime.

Chapters include old world charm, how much fun can you have?, complete history of flirting (abridged), getting down to flirting, dealing with success and rejection, flirting the job, at school and on the fly, real life flirting options and creative dating, and the rules of flirting.

Flirting is about fun. One little technique might improve your life whether you're really looking for a date or not. Order a copy. 7x9 softcover

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ARTS & CRAFTS

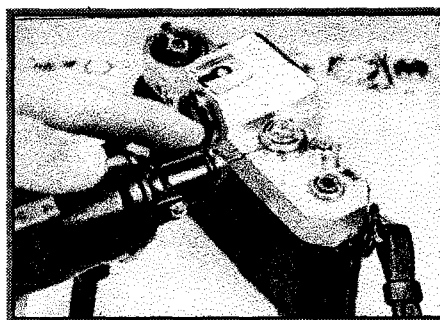
CAMERA MAINTENANCE & REPAIR

by Thomas Tomosy

Cameras are complex devices but many, many problems can be solved quite simply. This book won't necessarily put you in the camera repair business, but you WILL be able to make many repairs.

Chapters include how to use this book, what will you need, important rules and precautions, shortcuts, dos & don'ts, design considerations and characteristics, mechanical cleaning and lubrication, optical cleaning, cosmetic cleaning (exterior face lift), general disassembly and repair methods, accessories and how to maintain them, testing camera functions without instruments, simple diagnostic tools and methods, test instruments you can build, where to find parts and supplies.

Part two will take you through 31 different cameras including the Olympus OM-1, Pentax Spotmatic, Kodak Stereo, Canon AE-1, and even a Hasselblad. In addition parts three and four will give you additional hints on other cameras, tips, charts, and reference material.



Repair Cameras!

written by a European trained master camera technician

Once in the military in Germany I bought a bunch of old cameras for 25¢ each from a scavenger at the local city dump. The shutters didn't work, at least, until I dismantled, cleaned, and lubricated them. I've taken far better pictures with my 25¢ wonders than most people will ever hope to take with even the most expensive camera.

Used cameras are all over the place. Pick one up for a song, repair it, and use it (or give it to some creative kid as a gift...). You can't possibly become an expert with just this book. But it will get you started, and I think you might be surprised at the results you get. 8 1/2 x 11 softcover 172 pages No. 5012 \$24.95

Darkroom Plans Books!

BUILD YOUR OWN HOME DARKROOM

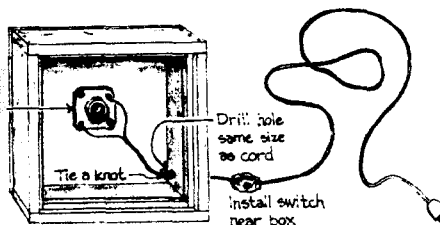
by Duren & McDonald

Photography is fun, especially if you process the film yourself. You get creative control that a drugstore processor is not interested in providing. So build yourself a darkroom and discover photography. You can build a lot of the equipment and spend the money you save on quality optics.

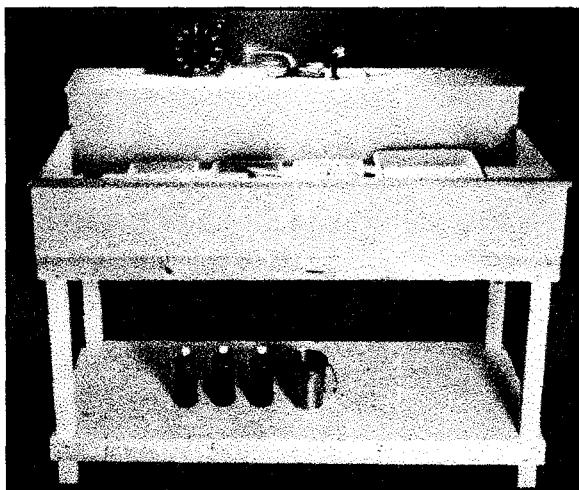
Chapters include darkroom design, woodworking, lightproofing, ventilation, a work table, enlarger wall mount, adjustable enlarger baseboard, light box, sink, water supply panel, and print drying rack.

You get plans, drawings, photos, parts lists, and so on. You can really save money. The sink described, for instance, is better than the cheap professional sink I bought and installed a few years ago in the corporate darkroom at a cost of over \$500!

The world of photography can be a creative high. Consider



building a darkroom and giving it a try! This book will certainly help. 8 1/2 x 11 softcover 154 pages wall-to-wall illustrations No. 517 \$17.95



CAST ALMOST EVERYTHING but metal...

The Prop Builder's MOLDING & CASTING HANDBOOK by Thurston James

Try this! Take a dead carp and make a couple two-part plaster molds before it starts to decompose. Then make urethane castings with the molds. These are the techniques that Hollywood uses to make props for movies.



This is a great book all about making molds and casts for theatrical uses. You'll learn about one- and two-part plaster molds, a two-part mold using the shim method, molds from dental alginate and moulage, and a variety of molds using latex rubber, Silicone RTV rubber, injected Silicone molds and more.

You'll learn what type of release compound to use for each combination of mold and casting material.

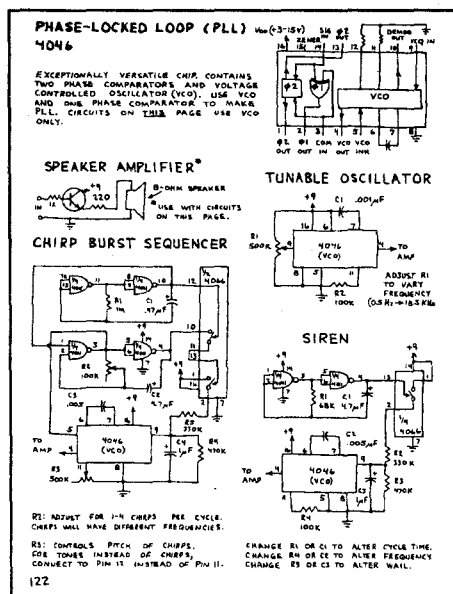
Then you'll learn how to do absorption casting with latex and neoprene casting rubber. You can make papier-mache, Celastic and fiberglass casts. You can cast with hot melts such as wax, machinable wax, hot plasticine, hot melt glue, and hot melt rubber. You can make fake "glass" bottles to break over people's heads, or panes of glass to safely throw people through during a barroom brawl (or the Christmas family get together). You might want to cast with polyester resins, urethane foam, plastic wood, Durham's Rock Hard and more.

Then there is a whole section on vacuum forming with thermoplastics using a large, high-performance, home-made vacuum forming machine. You can watch as artists reproduce railings, cornice molding and even tile roofs in lightweight plastic sheeting. It's quite impressive. And the whole book shows you how you can do it, too.

Wall-to-wall photos. Detailed how-to. Hints, tips and secrets. This is a book on casting practically everything EXCEPT metal. Rare information. I think you'll really like it. You get your money's worth, and then some in my opinion. 8 1/2 x 11 paperback 236 pages

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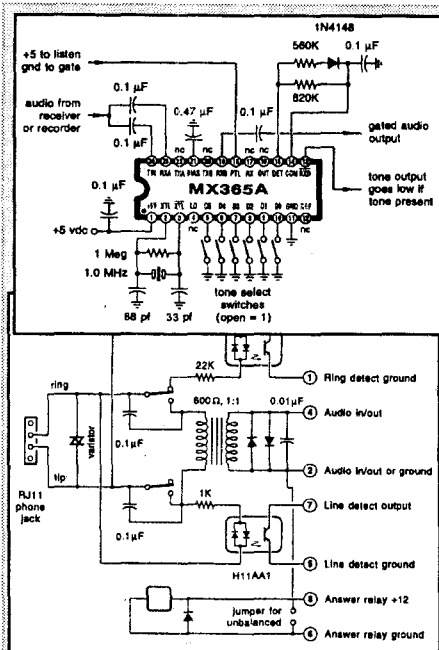
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The Forrest Mims ENGINEER'S NOTEBOOK

Each page delivers from one to six circuit diagrams for MOS/CMOS, TLL, and linear integrated circuits. You get just about everything you can imagine from simple logic circuits to including digital stopwatch, LED dual flasher, stepped tone generator, BCD to 7-segment decoder, bargraph generator, adjustable negative power supply, 6 volt nicad charger, bridge amplifier, optical power meter, electronic bell, toy organ, solid-state oscilloscope, programmable four state tone generator, pulse-frequency-modulate infrared communicator, sound effects generator, 16 watt bridge amplifier, percussion synthesizer, analog delay line, and much, much more. IC's are dirt cheap anymore. Take a handful of 'em and this book and have some fun dreaming up circuits. More than 750,000 copies of this book have been sold over the years. 8 1/2 x 11 paperback 155 pages

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HACKER!

by Don Lancaster

If you haven't heard about Don Lancaster and his columns in various magazines devoted to experimentation of all kinds, you should. Here is a collection of articles reprinted from *Electronics Now* magazine.

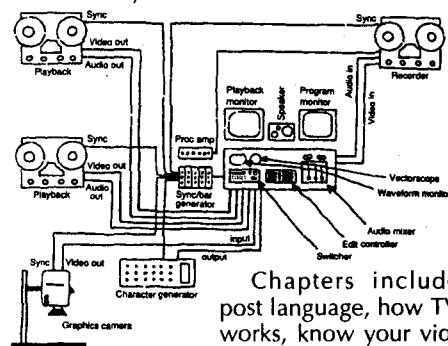
You get twenty four articles each touching on five different topics that cover all kinds of things— Caller ID chips update. Lumeloid and Lepcon films. Laser printing repairs. Sync separator circuit. Hacking Super Nintendo. FM stereo broadcasters. Dye-base solar energy. Micro-avionics newsletter. Synchronous rectifier ideas. Fundamentals of correlation. Marketing your ideas. Histogram equalization. UFO resources listing. FM Yagi antenna design. Two new piezo rate gyros. High side FET drivers. Relaxation oscillators. Simple home EDM machining. Steam calliope sources. BASIC stamp controller. Free GPS boards. Digital photo imaging. Error diffusion techniques. And much more.

Lancaster's columns cover just about everything under the sun heavily slanted toward electronics. His columns are always filled addresses of sources of parts, books, supplies that you won't find just anywhere else. (You'll find Lindsay Publications listed, too.)

You get diagrams, schematics, hints, tips, secrets you're not supposed to know, and all kinds of the off-the-wall info. If you read his columns, you know what this is a about. An encyclopedia of fascinating reading! It's very much like what this catalog is all about. Get a copy! 8 1/2 x 11 paperback about 144 pages with additional index 28 pages listing hundreds of names and addresses of unusual suppliers

No. 3027 \$24.50

If you have no more desire than to use your video recorder than to document your children's birthday, you don't need this book. But if you want to produce a "movie" either for your own creative enjoyment or one to be distributed, you'll need to know what's here.

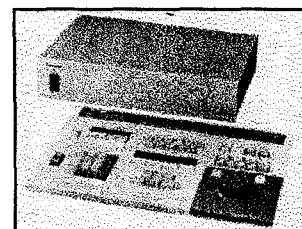


The diagram illustrates a video production setup. On the left, a 'Graphics camera' is mounted on a stand. It has two output lines: 'Sync' and 'Video out'. The 'Sync' line connects to a 'Character generator' on the right. The 'Video out' line connects to a 'Video out' port on the 'Character generator'. The 'Character generator' is represented by a grid of dots, with a small box labeled 'Character generator' below it.

Video! Post Production!

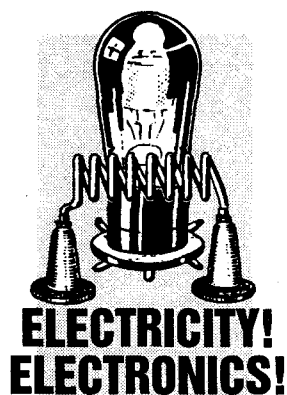
Make Quality Video Tapes

You'll get sample forms for planning shots, estimating costs of shooting and more. You'll be exposed to time base correctors, vectorscopes, shuttling, SECAM, and many other concepts. You'll learn how to set up simple and complex editing facilities with just a couple of VCR's or to the extent of using an edit controller, chroma key, effects generator, character generators, proc amps, sync gens, monitors and more.



TV industry I was behind a 500 pound color camera using a 4 1/2" image orthicon for the luminance channel. Our sync generator was vacuum tube! As one from the "good old days" of TV I can tell you that a hand held camcorder is an incredible invention that is underutilized.

This book can teach you how make something worth watching. Be creative! Have some fun. Diagrams, photos, charts. Great book that goes well beyond the routine basics found in other books. Think about ordering a copy. 7x9 softcover 330 pages
No. 3025 **\$26.95**



VIDEO SCRAMBLING & DESCRAMBLING FOR SATELLITE & CABLE TV

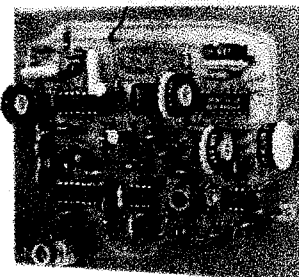
by Graf & Sheets

If you have purchased or plan to purchase a satellite dish to capture signals coming from the many Earth-orbiting satellites, this book is for you.

You get:

- An understanding of encoding/decoding systems
- The theory and techniques of video encryption and decryption
- An overview of the rules and regulations governing the availability and use of satellite signals, antennas, and programming materials
- Schematics and details for several encoder and decoder projects.

How to Unscramble Video!

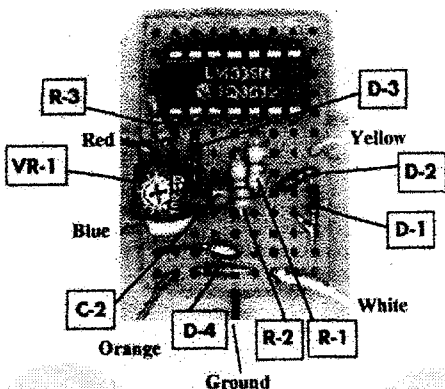


Originally published in 1987, this book provides detailed information on everything from simple cable encryption systems to commercial satellite systems such as VideoCipher II™, the B-Mac System, and even the Data Encryption standard.

Although the authors are quick to point out that the information is not to be misused in theft of signal, they have provided a wealth of schematics, printed circuit board layouts, IC chip specs, patent reprints, list of satellites and the scrambling systems they use and much more. This is a quality master reference that any video/satellite fanatic will find useful. Order a copy today! 8 1/2 x 11 paperback

246 pages
Cat. no. 370

\$24.95



Scanner Mods!

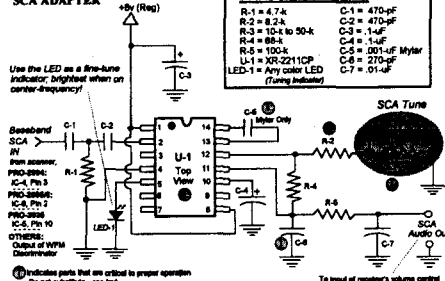
Get maximum performance!

THE ULTIMATE SCANNER

by Bill Cheek

What is the ultimate scanner? Ain't no such animal. But Cheek will teach you how to take a commercially available scanner and make all kinds of modifications that will enhance its usefulness. You can come close to ultimate.

SCHEMATIC DIAGRAM SCA ADAPTER



PARTS LIST - ELE-J	
R-1 = 4.7k	C-1 = 470-pF
R-2 = 8.2k	C-2 = 470-pF
R-3 = 10k to 50k	C-3 = 1-uF
R-4 = 10k	C-4 = 1-uF
R-5 = 100k	C-5 = 100-uF Mylar
U-1 = XR-2211CP	C-6 = 370-pF
LED-1 = Any color LED	C-7 = 0.1-uF
(Tuning Indicator)	

Use the LED as a fine-tune indicator. Brightest when on center frequency.

Indicates parts that are critical to proper operation. Do not substitute - see text.

Chapters include communicating is a hobby, what is an Ultimate Scanner?, general modification hints and tips, memory mods, subsidiary carrier authorization, data tone squelch, cellular mods, computer interfaces, fund stuff, epilogue, glossary, and resources.

This is wall-to-wall how-to to help you connect a scanner to your computer, add memory for scan channels, and, yes, even remove the lockouts that prevent scanners from receiving cellular phones (listening to such calls is illegal). You get nuts and bolts instructions like where to clip a diode, where to add components, how to change other parts. Most of the models mentioned are PRO models and a few BC models. He doesn't mess with early scanners since they're so badly out of date.

If scanning unusual radio channels is something you love to do, or is something you want to get into, this book is a place to start, especially if you have even a little experience with electronics. This book can dramatically increase the capabilities of your store bought scanner. Expensive but worth every penny for the guy who can use it.

8 1/2 x 11 softcover 242 pages

No. 3026

\$29.95



THE COMPLETE MANUAL OF PIRATE RADIO

by Zeke Teflon

If you want to go underground and run your own pirate radio station, this booklet will tell you how to go about it. Chapters include preliminary considerations, getting away with it, to buy or build, the studio, transmitters, antennas, mobile operation, finding parts, test equipment, safety measures, and technical references.

You get schematics and parts lists for building a one-watt and a five-watt FM transmitter. You get practical details on antennas and coax, and lots more.

Pirate radio doesn't make a lot of sense to me. If you have to keep changing your frequency so that the FCC doesn't find you, how are your listeners going to find you? And without advertisers, who is going to pay for all this?

I've always thought about building a small FM transmitter to be used unlicensed for a short time during disaster relief after tornados or hurricanes, for example, when local radio stations might be off the air. Take the battery operated transmitter to the highest site in town and you could be on the air broadcasting vital information. That makes sense.

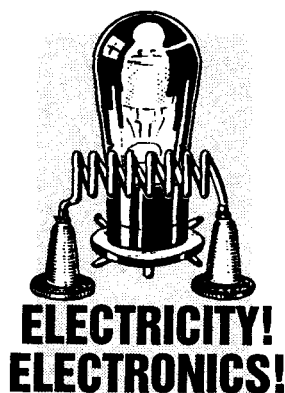
If you want to try to outfox the FCC with pirate radio, I guess you can try. It shouldn't be too hard. They're understaffed. But if you cause interference with my stereo equipment or computer, I'll come over and burn your house down. You've been warned.

Unusual. I can't believe this booklet will be in print very long. If you want one, you had better order one in the near future.

5 1/2 x 8 1/2 booklet 48 pages

Cat. no. 3011

\$5.00



UPGRADING THE IBM PC FAMILY 8088 TO 486

by Michael F Hordeski

Backcover: "Designed to help you maximize the capabilities of your PC, this innovative volume offers practical advice and tips for enhancing your existing system. Computer expert Michael Hordeski shows you how to add more hard disk space for storage, more random-access memory for modern programs, modems for communications and the exchange of data, and the newer video graphics boards and monitors for improved output.



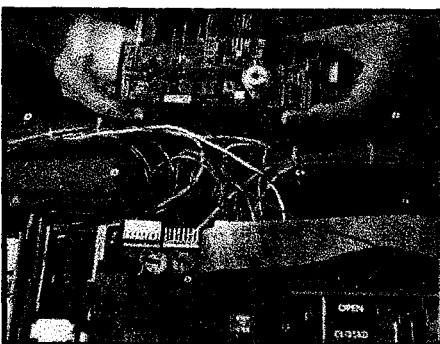
In addition, you'll learn how to • diagnose computer performance problems, and then decide whether you can upgrade or if you need to go to another system, • make more informed decisions regarding your PC's performance and functionality, •

UPGRADE YOUR COMPUTER!

select the best options among the available products and install the appropriate hardware and software, • determine which system problems require a hardware upgrade and which can be handled with software."

Lots of practical info on nuts-and-bolts computer hardware from printers and how they work to micro-channel machines (which I think is one of the biggest pieces of junk I ever bought! If I had only known...) Expensive book. But excellent. Consider it. 6x9 paperback 374 pages 1993
No. 3021 \$32.00

FIX YOUR COMPUTER!



SERVICING PC-BASED EQUIPMENT by Don Doerr

Here's a great book to help you service PC computers. The author wrote this in attempt to answer the most commonly asked questions from service technicians. I think he did a good job.

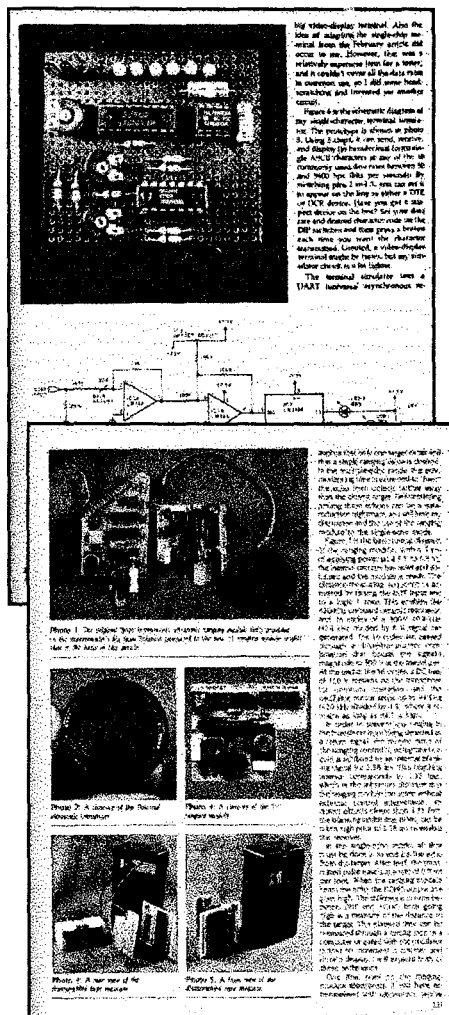
You get detailed flow charts to locate a problem. You can do your own repairs are a fraction of the cost of having it done. And if you DO choose to have someone else do the repair, you'll be able to ask intelligent questions. You'll be able to protect and recover your data. And much more.

If you take your PC to a dealer with a bad floppy drive, chances are they will replace it with a new one. Yet the author will tell you "floppy drive alignment is one of the easiest and most profitable areas of repair on PCs. Anyone who tells you that floppy drives are not worth repairing is either ignorant of how easily they can be repaired or is trying to ensure job security..." In other words, you can fix your own. Maybe you can make money doing it for others.

You get charts, diagrams, explanations of how components work, what the terms mean, pin configurations for common CPU chips, buses, ROM BIOS, error codes, and much more.

This is not for raw beginners, but you don't need to be an expert either. This can move you beyond the beginner stage. I just built and configured a high end 486 machine running UNIX, and I can tell you that this is one of the better books on hardware I've seen. I'll guarantee it won't answer every question (no book can), but this is worth the money.

Used PC's are cheap. Buy one and refurbish it. Maybe you can get started in repair. For me, the cost of the book is nickel-and-dime compared to the thousands I've got tied up in hardware that fills your order. Consider it carefully. 7x9 paperback 354 pages
Cat. no. 3005 \$26.95



Experimental Computer Circuits!

THE BEST OF CIARCIA'S CIRCUIT CELLAR
by Steve Ciarcia

Ciarcia's Circuit Cellar column ran in Byte magazine for 14 years. The best 37 articles are reprinted here. Computer technology changes constantly, and some of this is getting old, but a lot of this would be fun to try if I had the time.

Build an infrared/light scanner that tracks its target, a laser beam communicator, a sonar ranging system with a Polaroid ultrasonic transducer, a complete Z8 computer (kind of like building a crystal set), a switching power supply (great intro), computerized weather station, audio spectrum analyzer for making voice prints, an rs-232c breakout box (always useful), a video digitizer, a PC-compatible electroencephalograph (use it on your mother-in-law to see if she really does have a brain...) and much, much more.

Loaded with illustrations, diagrams, programs, practical nuts-and-bolts. A computer nut's dream. Get a copy. 8 1/2 x 10 1/2 paperback 453 pages
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Ancient Radio Apparatus

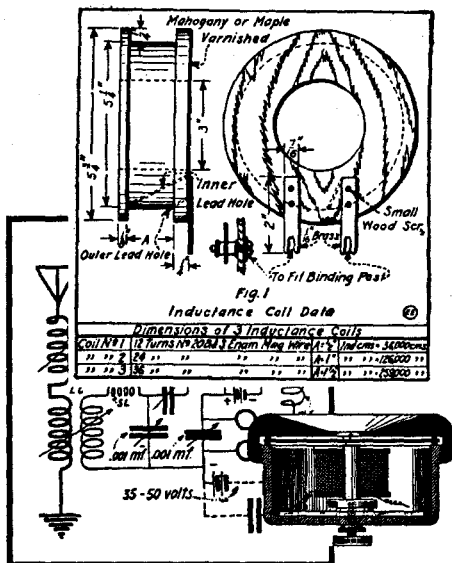


THE HOW AND WHY OF RADIO APPARATUS

by H. W. Secor, E.E.

reprinted by Lindsay Publications

Back in 1922 when shortwaves were the newest high tech frontier being explored. Secor set out to explain the how-to necessary for his readers to build radios and get in on the fun.



Radio Apparatus!

Chapters include: The Induction Coil, The Transformer, Radio Transmitting Condensers, Spark Gaps, Radio Transmitting Inductances, Radio Receiving Tuners, Radio Receiving Condensers, Detectors, Telephone Receivers, Radio Amplifiers, How to Make and Use a Direct-Reading Wave Meter and Decimeter, Radio Antenna Construction, The Calculation and Measurement of Inductance.

This is great stuff for experimenters old and new. You get some quaint stuff on spark gap sets you probably won't want to duplicate. But the direct reading wave meter and measurement of inductance could be quite valuable even today, especially for Tesla coil builders. Lot's of other good stuff.

"Crawl" inside the head of the old-time builders and learn how they saw the new field of electronics opening up. I like it. I think you will, too. Get a copy! 6x9 softcover 160 pages

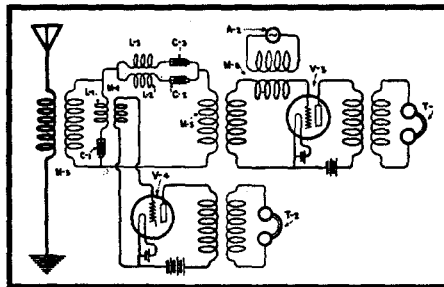
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\$8.95

VACUUM TUBES IN WIRELESS COMMUNICATION

by Elmer E Bucher

The description on the title page says it all. "This volume shows over 140 different circuits for the practical use of Vacuum Tubes as Detectors, Radio or Audio Frequency Amplifiers, Regenerative Receivers, Beat Receivers, and Generators of Radio Frequency Currents.

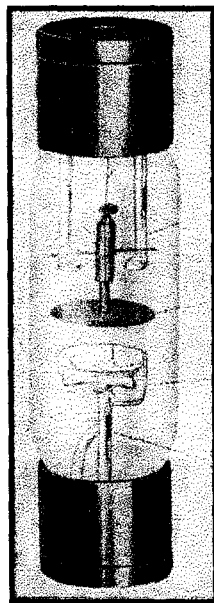


VACUUM TUBES

in Wireless Communication

The Two, Three and Four Element Oscillation Valves are described in detail together with the circuits used in daily practice. Cascade Amplifiers of the latest type for long distance reception are comprehensively treated. Up-to-date circuits for long distance receptions are comprehensively treated...

This 1919 handbook is almost all circuit diagrams, many being brand new to me. How about regenerative cascade systems, a modified Weagant Beat receiver, Espenschied's Duplex Wireless Telephone



system, or circuits using unusual tubes such as the Dynatron, the Plidynatron, the Kenotron, or the Pliotron? Back then, this book described the cutting of technology as radio began to move away from spark gap code transmission to continuous wave methods using tubes.

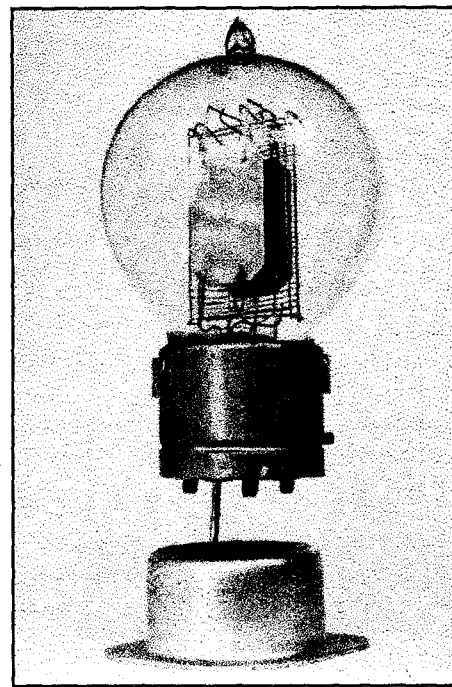
This is a great collection of very unusual radio history — something you don't find everyday. 'Course I know a lot of boneheads who would be just as happy if they NEVER found it any day. But

don't you be one of them. Consider this carefully. Its unusual.

5 1/2 x 8 1/2 softcover 208 pages

No. 20412

\$12.95



TUBES! VALVES!

70 YEARS OF RADIO TUBES AND VALVES
A Guide for Electronic Engineers,
Historians, and Collectors

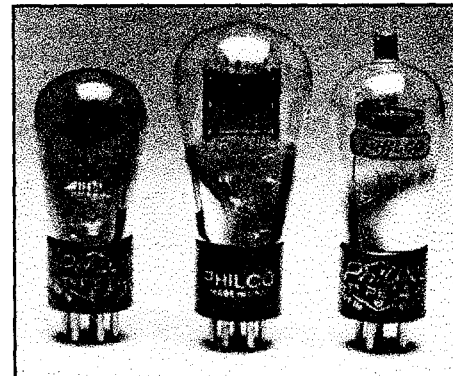
by John W Stokes

I just love tubes. They're mysterious bulbs of glass loaded with delicate metal sculptures inside, that light up to a brilliance, and give off more heat than a toaster! And oh, yes! They amplify and rectify electricity.

Tubes are getting scarce. They're something to start collecting if you haven't already. This book will open up the fascinating history of tubes to you. You'll see them all from the UX-201 (and earlier) to my old friends the 6C4 triode, the 6SN7 double triode, or a 12AU7. Gawd! I must have a thousand tubes stashed in the warehouse!

You'll meet manufacturers like DeForest, Ken Rad, Mullard, and others. You'll see over 750 tubes pictured, old ads, and more. Just like the title says, this is a great book for collectors, historians and engineers. And radio nuts like us! Get a copy. I think you'll like it. 8 1/2 x 11 softcover 247 pages
No. 3024

\$25.95



The photograph shows a physical prototype of a radio receiver circuit. A long ferrite rod is wound with 80 turns of wire, divided into four sections of 10, 20, 30, and 40 turns each. The sections are labeled A, B, C, and D. A transformer with a 10K primary and 100K secondary is connected to the rod. The circuit includes a 9V battery, a 10K resistor (R2), a 100K resistor (R3), and a 10K resistor (R4). A 50μA ammeter is connected to the output. The circuit is labeled with component values and pin numbers.

Figure 6: Crystal Set Plans

- step 6 ____ Solder one end of the detector and ground wire coming out of the bottom of your oscillator.
- step 7 ____ Solder the other end of the wax crystal that is half-way down the oct box coil. This connection later if need be.

Figure 1-4: Ticker Receiver

compelled to break up the oscillations of transmitter or receiver into groups suitable for response in the head telephone or to supply of the receiver to make them audible. The receiver is shown in use [that week] are: (1) The Poulsen Ticker or chopper (2) The heterodyne system; (3) The Goldschmidt Tone

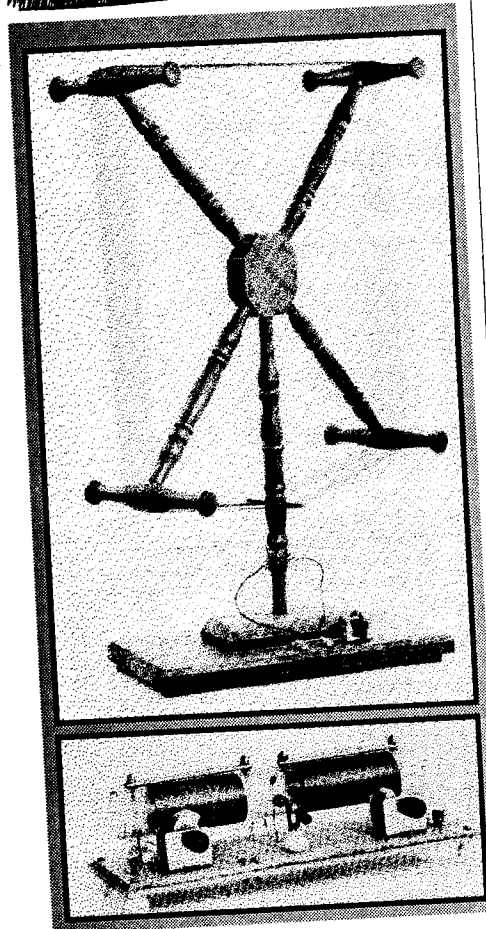
'strong enough and if proper filtering is carried out. The crystal set developing the power must filter out the music or voice to provide a steady DC supply for the transmitter amplifier. The filtering crystal set then simply does its normal job (tuning and selectivity), and supplies no radio signal to the amplifier which drives a speaker. Mr. Osburn reports that his local AM station was capable of providing 1 milliamperes (ma) of current into a 5000 ohm load (that's 5 milliwatts of power), sufficient to operate a simple transmitter amplifier and speaker.

Figure 1-1: Self-Powered Receiver

In Figure 1-1, the bottom crystal set is the DC supply. Capacitor C2 needs to be 10 μ d or so to filter out modulation coming from the local AM station, and the antenna is tightly coupled. The corresponding detector capacitor in the 'listening' set is labeled C1; its value is the usual 400 μ d (1000 pfd). Transformer T1 provides a match between the detector output and the low impedance transistor beam. The antenna is loosely coupled, preserving selectivity.

37

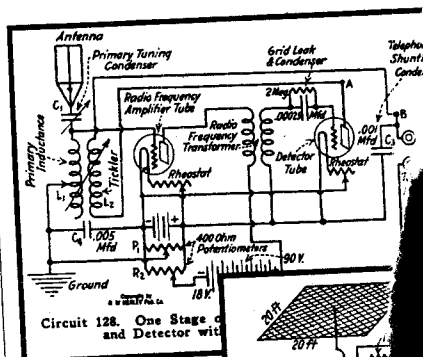
Interesting. If you're a crystal radio nut, get a copy of this. You'll learn simple testing and design techniques that engineers use. Great accurate information. Consider it. 5 1/2 x 8 1/2 paperback 133 pages
Cat. no. 3009 \$10.95



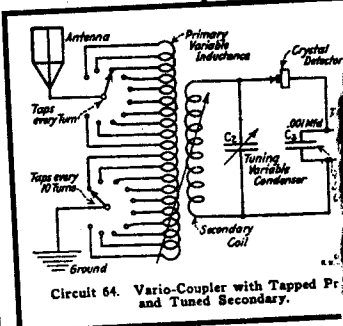
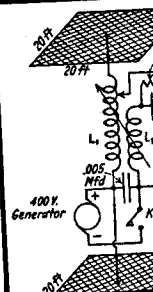
RADIOS THAT WORK FOR FREE

by K.E. Edwards
Build yourself a crystal set! You'll be shown everything you need to know - from materials to tools to techniques. Edwards will show you how to build "hot-rod" crystal sets with fancy features that can outperform the old oatmeal box versions, but are still simple. If you've never built anything electronic at any time but would like to try, this is a great place to start. This book has become a classic in its field, and it gives me a good feeling. I think you'll like it, too. 5 1/2 x 8 1/2 paperback 138 pages—well illustrated
Cat. No. 314 \$9.95

\$9.95



**Crystal sets,
regeneratives,
heterodynes,
transmitters,
more!**



by Anderson, Mills, & Lewis

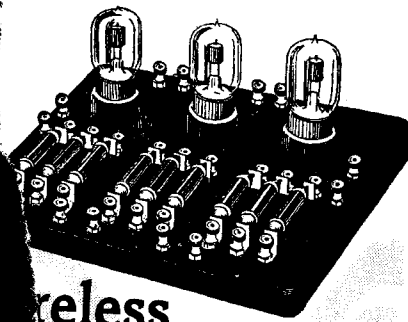
Chapter seven launches the vacuum tube detectors some with incredible tuning arrangements.

ter eight on audio amplifiers come nine on miscellaneous circuits include ultra-audio receiver, Reine with RF, detection and audio, on flex with crystal detector, three-tube with RF transformers, inverse receiver with BFO, three-tube ne counter EMF circuits, Cockaday Bishop super-regenerative receiver others. The final section of circuit reveals designs for spark, CW, m CW and AM transmitters.

Relive the days of radio when
were simple and components were
heavy. Absolutely great circuit book
fun. Order a copy. 5 1/2 x 8 1/2 pages
271 pages
Cat. no. 20323

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LINDSAY PUBLICATIONS INC, PO Box 538, Bradley IL



Wireless Experimenter's Manual

"Modern" 1920 Technology
Sets, Regens, More!

EXPERIMENTER'S MANUAL

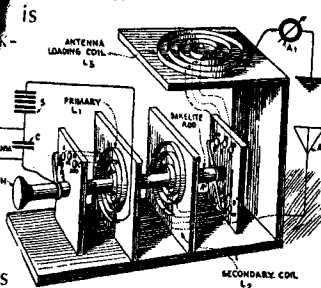
E. Bucher

by Lindsay Publications

showed 1920 radio enthusiasts
equipment and operate it. You
those days!

chapters on advice to the ama-
tion of a radio club, principles of
transmitter, construction of trans-
mission of aerials and masts,
detectors, vacuum tube detector
er, undamped wave receivers,
wave transmitters, cabinet re-
accessories, design of waveme-
coil aerials, Weagant static elimi-
long distance relays by radio.

everything from early spark gap
to continuous wave transmitters
telephone transmitters. You get
construction how-to on winding power
s, coil winding machines, oscil-
lators, high-voltage condensers,
gaps, making a key, building
with variometers, and home-
made detectors.

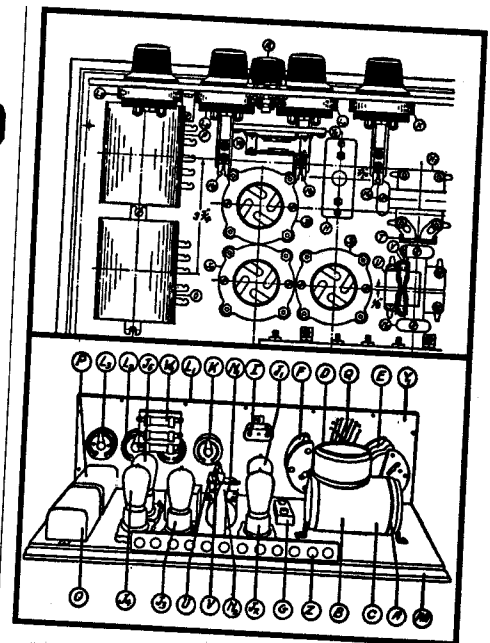


is
elements for crystals and as ampli-
All even get one of the very earliest
for Armstrong's original regenerative
s. And on and on it goes.

book! Fun reading. Incredibly good
want to build crystal sets, Tesla coils,
lators, repair old radios, or build re-
stitutions of antique equipment. Count-
incredible drawings. Get a copy. 5 1/2 x
paperback 350 pages

0854

\$13.95



Early Radio Plans!

POPULAR RADIO HANDBOOK NO. 1 -

How to Build Your Radio Receiver

edited by Banning & Cockaday

reprinted by Lindsay Publications

In 1924 the people at Popular Radio pub-
lished their magazine to cater to the explod-
ing interest in shortwave radio! What you get
here are the best construction articles from
that magazine.

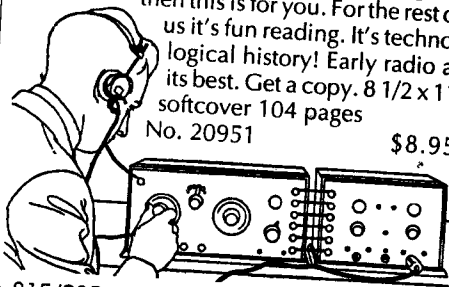
Chapters include: how to read a radio
diagram, how to put up an outdoor receiving
antenna, how to build an efficient NBS crys-
tal receiver, how to build the Haynes DX
receiver, how to build a two-stage audio-
frequency amplifier, how to build the four-
circuit tuner, how to build a tuned radio-
frequency receiver, how to build the im-
proved four-circuit tuner, how to improve
the three-tube four-circuit tuner, how to build
the new regenerative super-heterodyne re-
ceiver, and broadcasting stations in the U.S.
of 50-watt power or more.

This is old time stuff with four-prong tubes,
coupling controlled by moving the coils,
bread-board layouts, and 45 volt "B" batter-
ies. You get drilling layouts for the Bakelite
panels, dimensions for the cabinets, wiring
instructions and more. This is one of the best
early practical how-to books I've seen

If you have radios to restore, or have old
parts you'd love to lash up into a working set,
then this is for you. For the rest of
us it's fun reading. It's techno-
logical history! Early radio at
its best. Get a copy. 8 1/2 x 11
softcover 104 pages

No. 20951

\$8.95



NS INC, PO Box 538, Bradley IL 60915 • 815/935-5353

new chapter by T. J. Lindsay

Back in the 20's and 30's the only low-cost way of listening in on the newly discovered and fascinating shortwave radio frequencies was to build a set. Shortwave construction magazines flourished, even during the depression.

SECRETS OF OLD SETS! At the rear of the book are circuit diagrams, photographs, and design secrets of all shortwave receivers being manufactured in 1934 including some of the most famous: SW-58, the SW-5 "Thrill Box", the deForest KR-1, the Hammurand "Comet Pro", and many more.

Dear Mr. Lindsay:

It was also pleasant to read your commentary upon building regenerative receivers at the back of

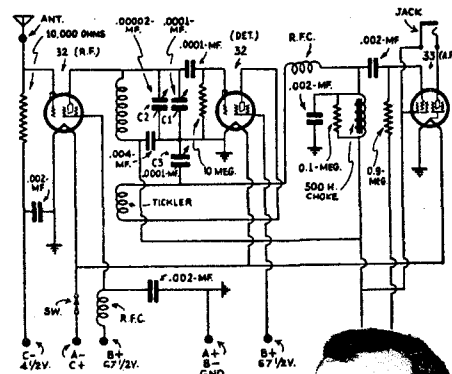
Official 1934 SHORTWAVE RADIO MANUAL

This is the nuts for the experimenter, the

But, as you know, one always gets only what one pays for. Buy a fancy, store bought receiver and you pay for results with money. Build a "homebrew" regenerative job, and you pay for it in the effort of building and operating it with patience and care, two words that most people scarcely know any more...

It has been my experience that the good old vacuum tube still makes the most effective regenerative detector, particularly the RF pentode. Next best, in the solid state line is the junction FET, as you suggest. But it takes two of these to do the job of one good pentode tube. However, all the FETs need is a nine-volt battery, no power supply required, a real advantage as you say.

Through the years I've found that the "Throttle Capacitor" mode of regeneration control, along with a properly adjusted tickler coil (as upon page 56, 58, 62, 66 and 259 of your book) is by all odds the smoothest and most effective regeneration control method. For pentode tubes, of course, a



Great book. Best old-time radio book I've ever seen. And I look at every one I can get my hands on. Consider it carefully. Even if you never build one of these radios, you'll get hours of enjoyable reading out of this book. Top rate. Order a copy.

\$15.95

pot in the screen circuit is ok, too. But, in general, the capacitor is my favorite - never critical, noisy or "jumpy", I've found. I've also found that when a tube is used, the higher the gridleak resistor the better (my best job used a 20 megohm leak). But for FETs, one megohm seems about right. (Too low and the sensitivity is down. Too high and the thing gets "fussy.") I would disagree, but not argue with, your theory of audio feedback through the power-source. I would feel that the inductive reactive effect of the audio transformer, or choke is the culprit. Pure resistance coupling does not develop "fringe howl," for instance. Also I find that with most FETs, a 1000 ohm source resistor is better than the 2700 ohm one that you suggest in the diagram at the top of page 247.

Building and using regenerative receivers continues to be a pleasurable experience for me. I have tried to get some young fellows of my acquaintance into this sort of activity with negligible success; they'd rather spend daddy's money upon fancy, store-bought gear. They do not realize how much honest education and real, challenging adventure they're depriving themselves of by that attitude. Too bad...

You are doing your part to keep the great self-education process alive and well. Keep it up!

C. F. "Rock" Rokey

Ancient Radio Apparatus



1001 RADIO QUESTIONS AND ANSWERS - 1926

edited by Leon L. Adelman
reprinted by Lindsay Publications

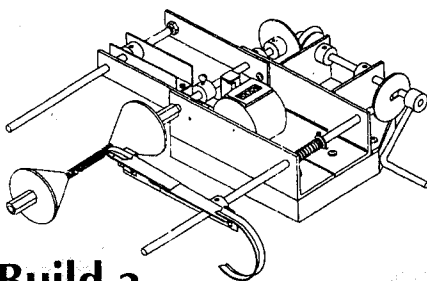
In 1926 the best questions to the editors of Radio News Magazine and their answers were compiled into this enjoyable book. Chapters include: miscellaneous circuits, popular circuits, tube data, transmitting circuits, current supply, amplifiers, antennae, and miscellaneous apparatus.

You'll see circuits for adding RF stages to regenerative receivers, circuits to sharpen tuning, a 5-tube 2-dial TRF set, circuits for cascaded regeneration, and dozens of other ideas. You get discussions concerning the use of Litzendraht wire for coil winding, new fangled superheterodynes, wave-trap design, and the Universal Plio-6 receiver capable of handling everything from 35 to 3,500 meter wavelengths. And there's so much more.

Underground Frequency Guide

UNDERGROUND FREQUENCY GUIDE
by Donald W Schimmel

You get "a directory of unusual, illegal, and covert radio communication." When you tune across the shortwave bands you'll hear voices reciting numbers in a variety of languages, "beeps", "rasps" and other bizarre signals. Here you can learn about what they are, or at least, what they're suspected to be. You can tune into the underground mystery networks with the frequency list provided and the notes on signals heard recently. Maybe you can figure out some of these mysterious signals. 6x9 paperback 209 pages 3rd edition
No. 388 \$14.95



Build a COIL WINDER

BUILD A UNIVERSAL COIL WINDING MACHINE
by David J. Gingery

Just a few years ago, experimenters could buy two or three simple hand-operated affordable coil winders. I haven't seen any of them advertised lately. You certainly can wind coils by hand, but if you're going to do any serious experimenting with old-time shortwave circuits, a coil winder is worth having.

Dave will show you how to build a coil winder from common, easily-obtained materials. Although it may look complex, it really is not. You'll find that it is easy to build. You don't need to be a mechanical genius, or need expensive tools. Yet this amazing little machine will professionally wind universal and honey-comb coils, single layer and multi-layer solenoids, close-wound and space wound coils, and even pi-spaced coils such as used for RF chokes and transformers.

This is a typical Gingery how-to book—loaded with illustrations, dimensions, and step-by-step text that is so detailed it almost holds your hand! Excellent publication. A serious experimenter should have a copy of this and the winder it describes. Order a copy. It's excellent. 8 1/2 x 11 booklet 24 pages

Cat. no. 386

\$8.95

HAMMARLUND SHORT WAVE MANUAL - 3RD EDITION

reprinted by Lindsay Publications

Hammarlund, one of the most reputable manufacturer of radio parts, was eager to sell you what you needed to build a low-cost receiver during the Great Depression. You get plans, schematic, parts connection diagrams, tube pin layouts, photos, and lots more. I haven't seen any plans better done than these!



12 SW Receiver Plans from Hammarlund!

Just a few left!
Won't be reprinted!

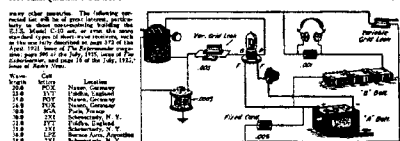
This is great stuff! For instance the "AC-DC 2-Tube SW Receiver" uses two double tubes, a 6F7 as an untuned RF amplifier and a tuned regenerative detector, and a 12A7 as audio amplifier and rectifier. The circuit is surprisingly simple, and yet I'm sure it performs very well! The "Pentaflex" uses a single 6A7 pentagrid converter tube as a regenerative detector and as an audio amplifier. This could be fun to build. And the "Ray Five Meter Set" is a three tube super-regenerative set for the then-experimental band of 5 meters (about 60 MHz). Back then a five meter set was a marvel! And there are nine other circuits plus a battery eliminator project.

This is fun reading and a great source of construction ideas. Get a copy of this. The price is reasonable and the content is super. Order a copy today. You'll enjoy it. 5 1/2 x 8 1/2 booklet 32 pages

No. 4937

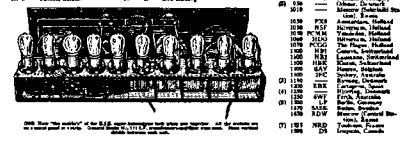
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1001 Radio Questions and Answers



Q	A	Q	A
1. What is the difference between a vacuum tube and a vacuum diode?	1. A vacuum tube is a device that contains one or more vacuum tubes, while a vacuum diode is a single vacuum tube.	2. What is the difference between a vacuum tube and a vacuum diode?	2. A vacuum tube is a device that contains one or more vacuum tubes, while a vacuum diode is a single vacuum tube.

THE DIODEMETER
The diode meter is a device that is used to measure the resistance of a diode. It is a simple device that can be built at home.



1001 Radio Questions & Answers

You get page after page of radio diagrams, most of them related to receiving. The original is on cheap disintegrating paper. A couple of pages actually have small holes (imagination will be required during reading). Fascinating reading. Order a copy today!

No. 21001

\$8.95

Food & Drink



BREWING BEERS LIKE THOSE YOU BUY by Dave Line

I find the title repulsive, probably because most of the beer I can buy is repulsive. I brew beer because I want something much better than the average American brew. When you realize that this is a British book, the title sounds good, since I like good British ale.

You get 100 or so recipes that are supposed to produce brews that taste like Tuborg, Heineken, Lowenbrau (the real German stuff),

COUNTRY WINES!

COUNTRY WINES

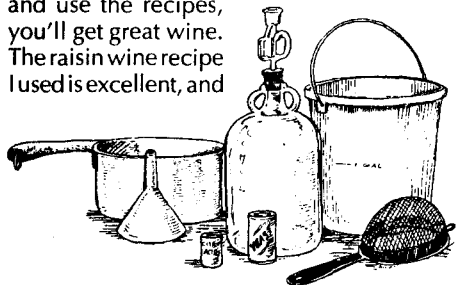
by Vargas & Gulling

"Making & Using Wines from Herbs, Fruits, Flowers & More."

Here's a collection of newly developed wine recipes that you can use to make excellent wine from apples, black berries, blue berries, clove & ginger, dandelion, wheat, clover, marigolds, sage, potatos and more. You get a complete chapter on making meads and metheglins from honey.

In the second half of the book you get recipes for cooking with wine.

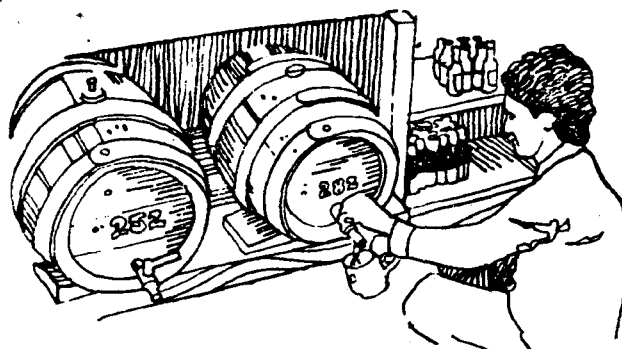
I have two problems with the book. First, it's a bit expensive. Second, the authors tell you to use table sugar. I'll tell you to never use table sugar. Use only corn sugar. It makes an enormous difference in quality. If you make that change, and use the recipes, you'll get great wine. The raisin wine recipe I used is excellent, and



the ladies sure seem to like the results. I haven't tried the other recipes, yet, but if they're half as good, the book is worth having for the home vintner's library. Consider it carefully. 6x9 paperback 170 pages

Cat. no. 6069

\$12.95



GREAT BEER RECIPES!

Perroni(?), Budweiser(?), Toby Light, Green King Pale Ale, Draught Bass, Adnams Southwold (!), Morland Best Bitter, Whitbread Tankard, Watnesy Cream Label Stout, Courages "Imperial Russian Stout", and many others.

You get basic brewing instructions in the first few pages, but I think this is really a collection of recipes aimed at the homebrew fanatic. And if you like beer and haven't brewed your own, you have really missed something. A great reference for me and the rest of barley malt crowd. 5 1/2 x 8 1/2 softcover 158 pages

No. 6075

\$10.95

SODA POP!

SODA POP!

Make your own soda! It's easy! And it's great soda!

Build this remarkably simple device using hardware store components, hook it to a bottle of carbon dioxide, and you're ready to make soda. The major expense is the CO2 tank and its regulator. But you'll quickly recover that cost in a single summer.

You can make great root beer, carbonate Kool-Aid, Coca-Cola, and other drinks at bargain prices. You can make gallon after gallon of soda water for ice cream sodas or for mixing with your favorite scotch. Experiment!

It's one of the most useful and popular machines (at least with the kids) I've ever built. A single small tank of CO2 last me about a year, and that's an ocean of soda. Each jug is very inexpensive. Get a copy, and build a soda pop machine! 5 1/2 x 8 1/2 booklet 22 pages

Cat. no. 88

\$3.00



BREWING THE WORLD'S GREAT BEERS A Step-by-Step Guide

by Dave Miller

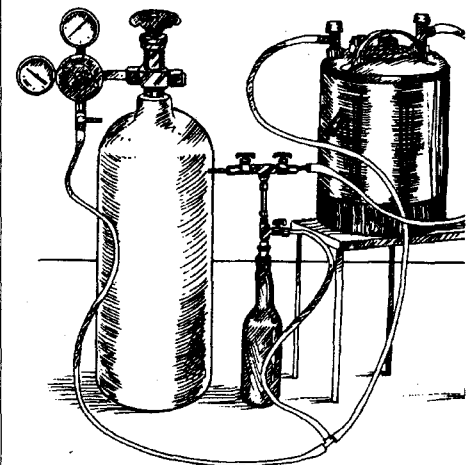
If you drink light beer out of a can because you think beer has to taste like aluminum, this book is certainly NOT for you. This is for people want to brew and drink great beer. This book will show you how to come extremely close to duplicating the world's finest beers. You'll learn how it's done step-by-step right here.

Chapters include getting started, steps to

Brew Great Beer!

better brewing with malt extract, first steps in grain brewing, the last step: all grain brewing, going semi-pro, glossary, bibliography, and sources.

This is full tilt. No simplification. You can brew a quality pale ale, a pilsner, or you can jury-rig an old refrigerator and get into lagering. You'll learn all the details of yeast, malt and measurements in degrees Lovibond, sugars, hops and their AAU's, all the equipment and techniques. If you really get into this, you'll learn the intricate technique of maintaining pure yeast cultures just as the



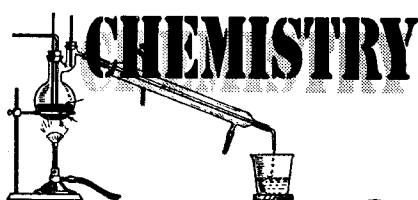
labs in the biggest breweries do and lots more.

You can make great ale, stout, porter, German ales, weizenbier, Munich dunkel, helles bock, and much more. You'll probably want to make some of your own brewery equipment. Your wife just might use the rolling pin on you when she finds you've turned the basement into a giant chemistry set, and when she finds that you and your friends are rarely sober anymore. But doesn't it sound like fun?

You get sources for brewing publications, associations, equipment, supplies and all the rest. This is one of the best brewing books I've seen yet. Well illustrated. An absolute must for the beer snob who dreams of brewing the best. Consider it while I open a brew. 6x9 paperback 150 pages

Cat. no. 6047

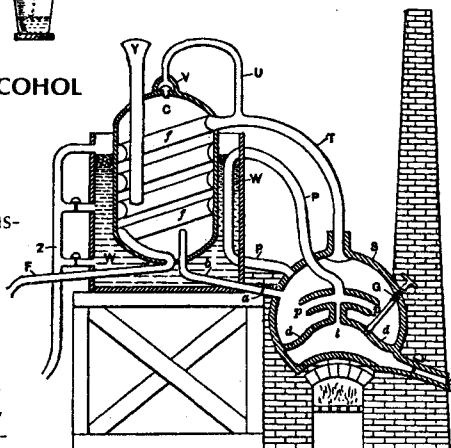
\$12.95



DISTILLATION OF ALCOHOL AND DE-NATURING

by F. B. Wright
reprinted by
Lindsay Publications

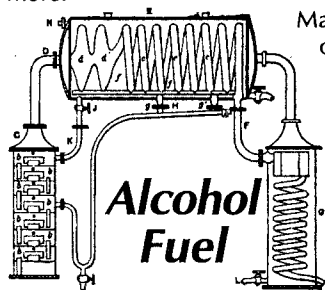
You can make industrial alcohol from anything fermentable. Here is one of the very best books you'll ever find on the nitty-gritty details of fermenting grain, fruit, potatoes, and more into a valuable fuel.



JUNGLE JUICE!

and sugar cane; alcoholometry; distilling plants, their general arrangement and equipment; denatured alcohol, and denaturing formulae; denaturing regulations in the United States (now no doubt obsolete).

You get many, many illustrations of stills, and their equipment. You also get drawings of a potato steamer and crusher, a storage cellar for beets, a roll press for beets, a molasses fermenting house and more.



Mashing is a process of natural enzyme chemistry that converts common starch into fermentable sugars. The process is touchy because it must be carried out at precise temperatures. Here, you get recipes and the precise details on mashing.

You'll also get formulas for denaturing alcohol, that is, making it undrinkable so that you can sell it and use it legally. Obviously

this is a top rate book for the manufacture of fuel in small, medium, or outrageously big lots.

A lot of this info is pure moonshine know-how. What you don't get however, are details on making drinkable alcohol. Booze tastes good because it has been fermented from special, often secret, recipes, distilled in unique stills in a unique way, and has been aged in wood. The raw output from these methods could be drunk, but probably won't taste very good, and the fusel oils could give you a very nasty hangover. This is fuel, and engines aren't too fussy about the booze they consume. If your goal is to make whiskey, you're on your own. It's against the law.

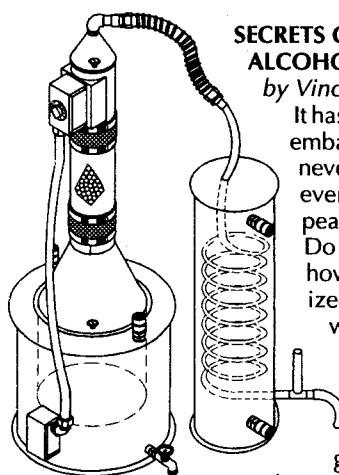
Great book! Originally copyrighted in 1907. Loaded with detailed how-to. Tremendous reference and source book for survivalists, farmers, Snuffy-Smith-types, chemistry buffs, and the curious. Good stuff. Get a copy. 5 1/2 x 8 1/2 paperback 271 pages

Cat. no. 21427

\$14.95

SECRETS OF BUILDING AN ALCOHOL PRODUCING STILL

by Vince Gingery



It has been a long time since the Arab oil embargo created a shortage of gasoline never before seen in this country. And even after the gasoline lines disappeared, the price of gas skyrocketed. Do you remember? Do you remember how people panicked when they realized they had nothing to feed that four wheeled gas hog that got them to work each day?

Do you remember all the red-neck boasts about how "Bah Gawd, I'm gonna bury a 200 gallon tank in the ground and fill it with gas..." as if somehow that would solve

the problem? An intelligent person knows that hoarding is not a solution to shortages. An intelligent person finds alternative solutions, and this machine is just such a solution.

Make Alcohol!

Powerful homemade liquid fuel!

Instead of trying to stockpile gasoline, you can make your own substitute out of sugar, corn, potatoes, the ol' lady's underwear (well... maybe not that), or just about anything you can ferment into alcohol. This still will remove the water, creating almost pure alcohol (close to 200 proof) that you can burn in just about any type of engine.

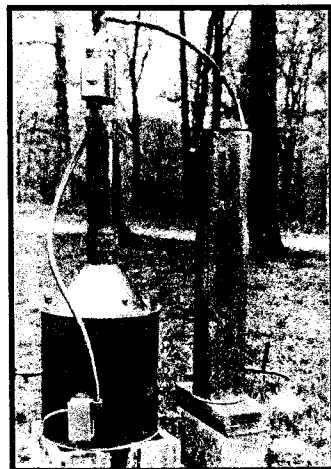
Here Vince will teach you how to take common plumbing parts, copper sheeting, and standard electrical parts and build a 6 gallon capacity still. He'll show you how to malt, mash, and ferment corn into fuel and turn it into fuel. And Vince will show you how easy it is to get a license and do all this with the blessing of authorities.

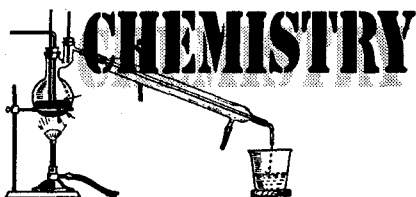
The still heats the wash with a water jacket in which is immersed a 120 volt water heater element. Temperature is controlled with a continuous thermostat. Eventually vapors boil through the rectifying column to the condenser. If you carefully maintain the precise temperature, you'll get almost pure alcohol.

The fuel you produce is not going to be cheaper than gasoline unless you have a low cost source of fermentables and want to make a version you can fire with scrap wood or coal. But remember. If you can't buy gasoline at any price, even alcohol at three or four dollars a gallon is a bargain. And if you use it to power a small motor scooter that gets 200 miles to the gallon, you'll be getting around when everyone else is walking or bicycling. What you'll make here is a device that can turn common table sugar into a substitute for gasoline the supply of which no one can control but you.

I'm sure you could use the still to make whiskey and brandy. But I'll tell you up front, that's against the law whether you sell it or not. The Feds want their taxes. If you're going to make moonshine, don't tell me about it.

Great book on a great machine! Be independent. Thumb your nose at the corner gas station. Build a still, and make fuel. Order a copy. 8 1/2 x 11 paperback 76 pages
Cat no. 6060 \$11.95





MANUFACTURE OF WHISKEY, BRANDY & CORDIALS

by Irving Hirsch
reprinted by Lindsay
Publications Inc

You'll find books on making wine and beer in lots of different places. But finding books on making booze, good, drinkable booze (if there is such a thing...) are almost non-existent. I suspect it has to do with taxes. Making booze is illegal without a government permit. What you get here are the secrets of making booze that you're not supposed to know!

In 1937 the author, a chemical engineer, put together this industrial handbook to teach others how to produce hard stuff. Prohibition had ended, but the Great Depression hadn't. I guess there wasn't much to do but drink...

Chapters include whiskey, treatment of grain, rye whiskey, distillation of liquors, distillery equipment and appliances, manufacture of brandy, of apple-jack, of pear brandy, of slivowitz, of fruit brandy, of rum, of gin, of miscellaneous liquors, of cordials, blending, maturing of spirits [very important], artificial maturing of spirits [trade secrets?], clarifying liquors, water, sugar and syrup, coloring and much more.

We're not talking about small moonshine stills. And dis ain't "white lightnin'" that tastes like liquid fire. This is good stuff. We're dealing with big stills and big processes the way the pro's did it and are probably still doing it. You get diagrams of many different types of stills, condensers, filters and so on. You get recipes for everything from gin to creme de cocoa. You get useful tips on blending scotch whiskeys, problems that occur if whiskey stays in bond too long, problems with sweating casks and much more.

I'll never make my own booze. I'm too lazy, I guess. Nevertheless I found this book

Manufacture of Whiskey, Brandy & Cordials

interesting

because this kind of information that is never published. It's passed on through apprenticeships. The text is typewritten, and the illustrations are industrial. I get the overpowering feeling that this is information that the government and especially the distilling industry wants to keep to itself.

Excellent, rare information. An interesting book on something that people have enjoyed and gotten into trouble with since the beginning of time.

Get a copy and enjoy it. But don't get into trouble. Order a copy today! 5 1/2 x 8 1/2 paperback 183 pages

Cat. no. 20935

\$9.95

LINDSAY PUBLICATIONS INC, PO Box 538, Bradley IL 60915 • 815/935-5353

PRACTICAL DISTILLER

by Leonard Monzert

reprinted by Lindsay Publications

Make moonshine! Poison yourself! Go blind!

From 1889 comes this little gem of a book showing how to distill "Brandy, Gin, Rum, Whiskey, Arrac, Poteen, etc., all of which owe their respective intoxicating properties to the amount of alcohol which they contain."

While other books show you how to make fuel alcohol, this one will show you the

PRACTICAL DISTILLER

equipment you need to make booze. Included are discussions on the still and appurtenances, the farmer's still, directions for erecting a distillery, running a charge, the doubler, distillation of liquors, rectifying or leaching, alcohol refining, distillation of volatile oils, extracts, the water bath still, essences and liqueurs, blending and compounding and more.

Making booze without a permit is

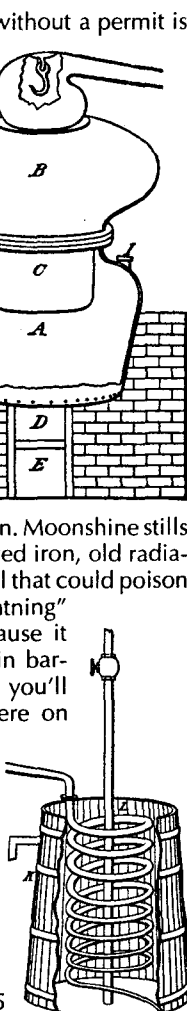
illegal. The government wants its taxes. You can use the equipment to make fuel alcohol for your car, perfume, and even vinegar.

If you intend to make booze, you're on your own. Moonshine stills were made with galvanized iron, old radiators, and other nasty metal that could poison you. Besides, "white lightning" tastes like lightning because it isn't aged or mellowed in barrels. It's nasty stuff. And you'll find little information here on turning out really good whiskey. This is a book on equipment, not gourmet cooking.

A great curiosity. Rare information. I won't tell the WCTU or BATF you're ordering copy. 5 1/2 x 8 1/2 paperback 156 pages

Cat. no. 4589

\$8.95





CHEMISTRY

HOW TO MAKE MIRRORS

reprinted by Lindsay Publications

"The Brashear, rochelle salt, and formaldehyde formulas are given, together with a detailed discussion of the precautions which should be taken to avoid danger and the technique which has been found to yield the most satisfactory results at the bureau. Methods are also given for the production of reflecting films on glass by the chemical deposition of copper, platinum, or lead sulphide, by cathode sputtering, and by the condensation of vaporized metals."

MAKE MIRRORS

Be warned that should you mix some of the chemical too strong, there may be a dangerous explosion. But the manual goes into great detail about eliminating the dangers, and the practice of silvering. It is written for the beginner and leaves very little to the imagination. A reprint of a 1931 booklet issued by the Bureau of Standards. Excellent! 5 1/2 x 8 1/2 booklet. 15 pages 2 drawings.

Cat. No. 885

\$3.00

LINDSAY'S CHEMICAL CROSS REFERENCE

by Lindsay Publications Inc

If you haven't run into the problem yet, you will. You'll be reading some old chemical formula calling for mirbane oil, salt of satum, or liver of sulphur. A quick check of this handy list of chemical terms would tell you that you need nitrobenzene, lead acetate, or potassium sulphide.

CROSS REFERENCE!

Translate Obsolete Old-Fashioned Chemical Names

What we did was enter into our computer two thousand chemical equivalents gleaned from a variety of chemistry textbooks, industrial references, and formularies in our reference library dating back to the early 1800's. The computer merged and sorted the lists into alphabetical order. The result is a chemical cross reference.

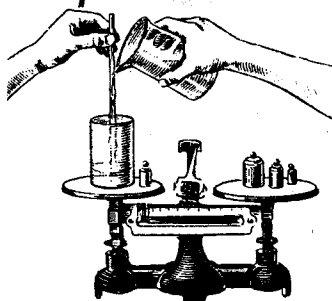
We have kept unusual and probably incorrect spellings. We have made no attempt to verify that the definitions are correct. What we have done is provide you with one master list of the best equivalents we could find. We've already found it useful, and you will too. Get a copy for your reference library. 5 1/2 x 8 1/2 paperback 44 pages

Cat. no. 20170

\$5.95

MANUAL OF FORMULAS

Great Chemical Recipes from 1932!



MANUAL OF FORMULAS, RECIPES, METHODS AND SECRET PROCESSES

edited by Raymond Wailes
reprinted by Lindsay Publications

Here's a great low cost collection of hundreds of formulas on just about every subject you can imagine compiled from the pages of Popular Science Magazine and published in 1932.

You can make soap bubble liquids, solidified gasoline, waterproof matches, lacquer for brass, silver solder, photographic printing paper, slow-drying putty, blackboard paint, thermite welding mixtures, pewter alloy, garden sprays, soaps, preparations for dance floors(?), concrete waterproofing compound, fireworks, cosmetics, adhesives and much more.

You'll learn how to mix up compounds for polishing and plating metal. Learn how to blacken brass, blue steel, to make silver nitrate from old spoons, mix up low temperature alloys, dry flowers, brew wine, re-ink typewriter ribbons, make blueprint paper, dye cloth, make flypaper and much more.

Unlike other formularies, this one is new enough to be useful and old enough to have unusual formulas. And the price is quite reasonable compared with the large volumes which are interesting but often contain many formulas that are of little practical value. An interesting book of definite value. Worth having. Order a copy today. 4 1/2 x 8 paperback 250 pages
Cat. no. 20366 \$9.95

CONTENTS

• **Division I** — Chemical Metallurgy; Alloys; and Preparations Made and Obtained from Metals. Iron; Pig or crude iron; Malleable, bar or wrought-iron; Steel; Iron Preparations; Cobalt; Nickel; Copper; Preparations of Copper; Lead; Preparations of Lead; Tin; Preparations of Tin; Bismuth; Zinc; Preparations of Zinc; Cadmium; Antimony; Antimonial Preparations; Arsenic; Quicksilver or Mercury; Preparations of Mercury; Platinum; Silver; Gold; Manganese and its preparations; Permanganate of Potassa; Aluminum; Magnesium; Electro-Metallurgy

• **Division II** — Crude materials and products of chemical industry — Carbonate of Potassa; Saltpeter, Nitrate of Potassa; Nitric acid; Technology of the Explosive Compounds — gunpowder, and the chemistry of fireworks or pyrotechny; Nitroglycerine; Gun-cotton; Common salt; Manufacture of Soda — native soda; Soda from plants or soda-ash; Soda Prepared by Chemical Processes; Preparation of Iodine and Bromine; Sulphur; Sulphurous and Hyposulphurous Acid; Manufacture of Sulphuric Acid; Sulphide of Carbon; Hydrochloric Acid and Glauber's Salt, or Sulphate of Soda; Bleaching Powder and hypochlorites; alkalimetry; Ammonia and ammoniacal salts; Soap making; Boric or boracic acid, and borax; Production of alum, sulphates of alumina, and aluminates; Ultramarine

• **Division III** — Technology of Glass, Ceramic Ware, Gypsum, Lime & Mortar Glass manufacture; Ceramic or earthenware manufacture including hard porcelain, tender porcelain, stoneware, Fayence ware, common pottery, brick and tile making; Lime and lime-burning; Mortar including common or air-setting mortar and hydraulic mortar; gypsum and its preparation

• **Division IV** — Vegetable Fibers and Their Technical Application — Hemp; Cotton; Paper making — hand paper, machine paper, pasteboard and other paper; Starch; Sugar manufacture; Cane Sugar; Beet-root; sugar; Grape sugar; Fermentation; Wine-making; Beer-brewing; preparation or distillation of spirits — preparation of vinous mash and distillation of the vinous mash; Bread baking; Manufacture of vinegar; Preservation of wood; Tobacco; Technology of essential oils and resins; Cements, lutes and putty

• **Division V** — Animal Substances and Their Industrial Application — Woollen industry; Silk; Tanning; Glue Boiling; Manufacture of Phosphorus; Requisites for producing fire; Animal charcoal; Milk; Meat

• **Division VI** — Dyeing and Calico Printing — Aniline colours; Carbolic Acid colours; Naphthaline pigments; Anthracen pigments; Pigments from Chinchonine; Red Pigments occurring in plants and animals; Blue dye materials; Yellow dyes; Bleaching; Dyeing of spun yarn and woven textile fabrics; Printing of woven fabrics

• **Division VII** — Materials and Apparatus for Producing Artificial Light — Artificial light from candles; Illumination by means of lamps; Gas; Paraffin and solar or petroleum oils; petroleum

• **Division VIII** — Fuel and Heating Apparatus — Fuel; Wood; Peat; Carbonized peat; Brown-coal; Pit coal or coal; Petroleum as fuel; coke; artificial fuel; gaseous fuel; heating apparatus; heating dwelling houses; boiler heating and consumption of smoke

CHEMICAL MANUFACTURING SECRETS

1872 HANDBOOK! Everything from pig iron and nitric acid to bread and wine!

HANDBOOK OF CHEMICAL TECHNOLOGY 1872

by Rudolf Wagner

translated by William Crookes

reprinted by Lindsay Publications

In the 1872 German chemists were world famous, and Wagner's Handbook was the master reference for chemists the world over. This translation of the eighth German edition can be yours for much less than an original copy should you be able to find one.

And what a book it is!

You'll early and/or simple ways of making chemicals, refining metal, formulating glue, paper, dyes or just about anything else chemical in nature. I have never seen such a comprehensive collection of incredible technological detail in a single volume anywhere else.

Want to refine iron ore into steel? Want to make sulphuric acid? And use it to make nitric acid? And use it to make explosives? Care to brew beer? How about a batch of whiskey? A loaf of bread? And on, and on, and on. You get a whole encyclopedia in a single volume — 745 pages of small type with 336 illustrations mostly of manufacturing apparatus.

This is not really a cookbook. You won't find step-by-step instructions. But you will find more detail on a wider variety of basic essential processes (many of them made obsolete by more complicated processes) than in any other volume. For instance, if you're investigating the tanning of hides, making illuminating gas, charcoal, soap, or anything else, you'll find that this single volume can provide more information in less time than a search through most libraries for a month of Sundays.

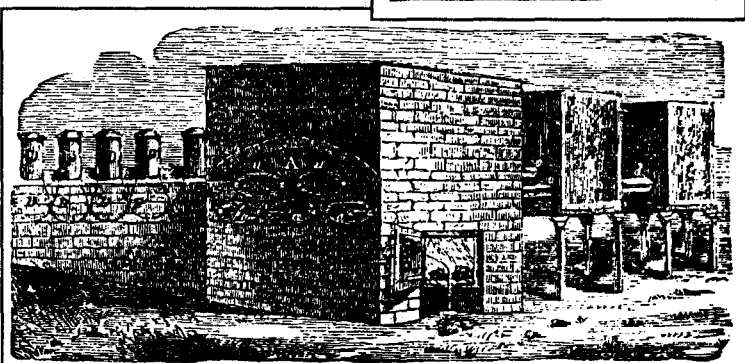
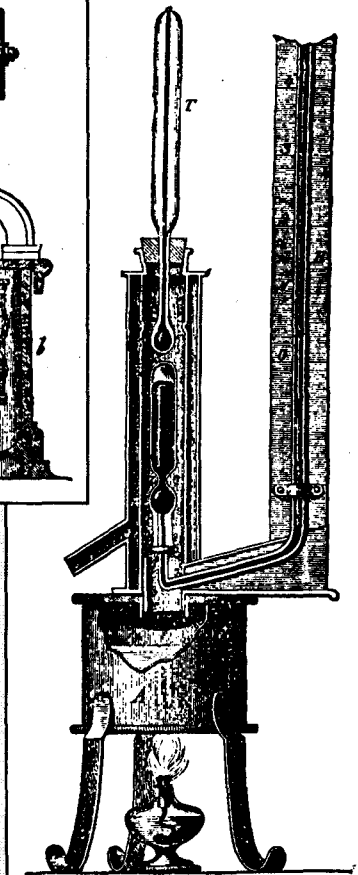
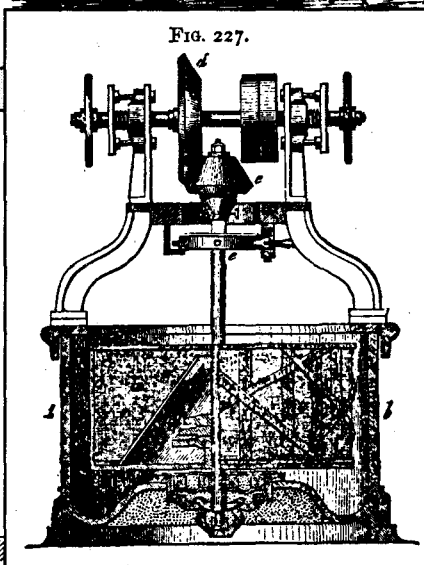
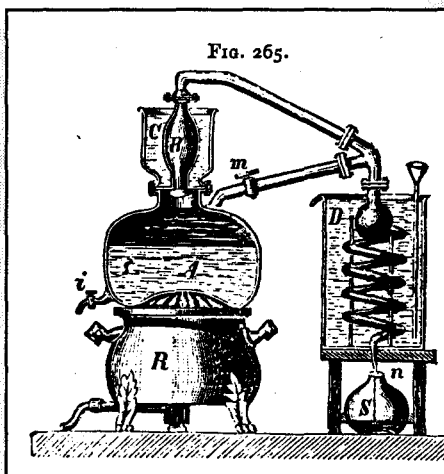
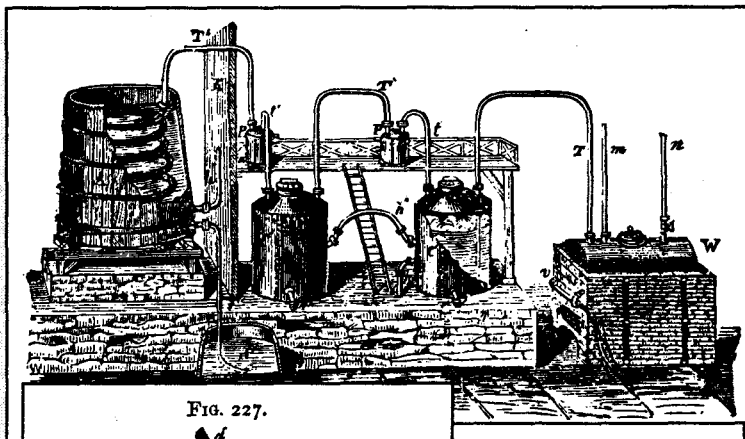
Yes, this is an expensive volume, but you actually get more than what you pay for. This is quality. Today we have sophisticated, hi-tech processes that are closely guarded industrial secrets. Here you learn how it was done before large corporations and PhD chemists took over production. Be warned, though. This is old world thinking. You run the risk of poisoning yourself. These methods can be and probably are dangerous.

This incredible classic text will definitely fill a void in your reference library. I've never seen anything like it. And it's almost a sure thing you haven't either. It's expensive, but it's worth every penny and then some. Order a copy. You won't be disappointed. 5 1/2 x 8 1/2 hardcover 745 pages

332 illustrations

Cat. no. 4996

\$29.95



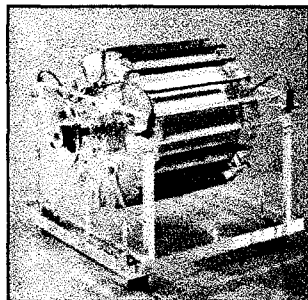
High Voltage!



ELECTROSTATIC MOTORS, Their History, Types, and Principles of Operation

by Oleg D Jeffimenko

We offered this book three years ago and thought they were all gone. We found a carton that had been lost in the warehouse.



We have only a few copies. These are available first come, first served.

This is a book about motors that run not on current elec-

Treasure discovered in our warehouse!

A few leftover copies of rare static motor book found.

tricity from out of the wall, but on static electricity like lightning bolts. This is a combination of illustrated history going back to the 1700's as well as a collection of photographs of incredible motors that have been built in the last few decades. For instance, you get photos of a 1/10 hp version of the Poggendorff motor that runs off 6000 volts as well as from electricity capture from the atmosphere using an earth field antenna. It's beautifully built.

This is not a construction manual. There are no plans. But the photos of the modern machines plus the history revealed will no doubt suggest many ideas for experimentation. I have never seen another book like this, and don't expect to any time soon. This was put out in 1973 and copies we have are somewhat yellow and a little bent. But this is a take-it-or-leave-it deal! This book isn't going to be reprinted. If you want it, you have got to order in NOW. Don't be surprised if your letter gets here too late, and we have to tell you we can't supply you.

Very unusual book on lightning bolt motors. Only a carton or so of copies left. 5 1/2 x 8 1/2 softcover 123 pages
No. 390

\$14.95

300,000 Volt Impulse Transformer!

CONSTRUCTION OF A QUARTER MILLION VOLT IMPULSE TRANSFORMER

by Steve Hansen

Introduction:

"High voltage pulses in excess of 100 kV and of multi-microsecond duration are required for many types of apparatus used in vacuum physics. Examples include charged particle sources, flash x-ray tubes, pulsed neutron and gamma ray sources and plasma immersion implantation, to name but a few....

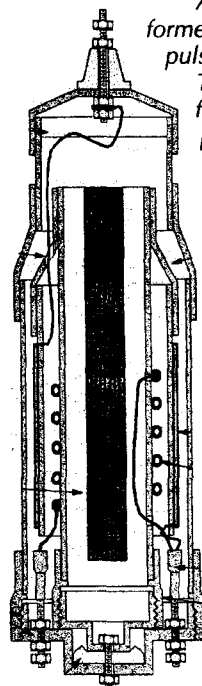
There are several common types of transformer that are useful for producing high voltage output pulses. A type familiar to most amateurs is the Tesla coil....

Another type of transformer is the non-distorting pulse transformer...

The third type of transformer is the high peak power pulse transformer, also known as a shock or impulse transformer....

The impulse transformer that is described here is powered by a 4.4 μ F, 10 kV capacitor. With a turns ratio of 36:1, the no-load output is in excess of 300 kV..."

Like a Tesla coil, the wiring diagram for a pulse transformer is ridiculously simple. The secrets lie in building a device that operates without shorting out. Hansen will show you how to build this impressive device using PVC, copper tubing, a laminated iron core and other common materials. He'll show you the high voltage power supply similar to transmitter supplies traditionally described in the "Radio Amateur's Handbook".



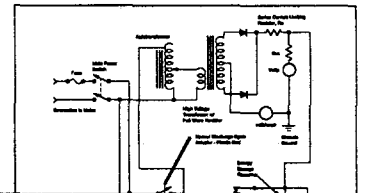
This beast will produce sparks only about 8" long due to its operating characteristics. If you want long sparks, go with a 300 kV Tesla coil. But don't even think of yourself as an expert in high voltage unless you're familiar with this type of lightning bolt generator.

There are only a few pages to this report, but when you see the quality of the content and the beautifully drawn diagrams, you'll realize that this information is quite reasonably priced. This is a jam-packed report with proven how-to. Reprinted from Hansen's newsletter "The Bell Jar". Worth having. Get a copy. 8 1/2 x 11 pamphlet 10 pages
No. 3017

\$7.95

DISCHARGE & CONTROL CIRCUITS

The discharge circuit is shown in the lower part of Figure 4. This circuit is the simplest, the high voltage being applied to the top of the discharge tube. The discharge circuit is shown in the upper part of Figure 4. This circuit is the simplest, the high voltage being applied to the top of the discharge tube. The discharge circuit is shown in the lower part of Figure 4. This circuit is the simplest, the high voltage being applied to the top of the discharge tube. The discharge circuit is shown in the upper part of Figure 4. This circuit is the simplest, the high voltage being applied to the top of the discharge tube.



Exploding Wires!

EXPLODING WIRES

Principles, Apparatus and Experiments
by Steve Hansen

Exploding wires and foil go back a couple of hundreds of years when static electricity machines were being perfected. Even wild man, Ben Franklin, blew things up with powerful jolts of electricity. It must have been really spectacular at parties!

When you think about it, this is really a misapplied spotwelder of sorts. Essentially, you dump a vast amount of electrical energy through a thin wire in a very short time. The enormous current that flows through the resistance of the wire generates searing heat, melts the metal wire, vaporizes the metal, generates a blinding flash, and liberates a sonic shock wave (guaranteed to scare the neighbors).

In this slim but well-written and well-illustrated booklet you get everything you need to know to pull off one of the more bizarre science stunts around. You get the basic history and theory, analysis of the DC charging circuit that loads up storage capacitors, discussion of discharge and control circuits, and experiments. You also get several possible sources for the unusual components.

What good is? What good is a Tesla coil? It's for fun. Explode wires! This is a necessary course if you ever hope to get your Mad Scientist Degree. Get a copy. Very unusual information. Well done. Worth having. 8 1/2 x 11 booklet 11 jam packed pages
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High Voltage!



Secrets of Building Electrostatic LIGHTNING BOLT GENERATORS

by Walt Noon

Generate lightning bolts of static electricity! Walt Noon will show you and explain the experiments he has run, the problems he has encountered, his solutions to those problems, ways to build low cost lightning bolt generators from parts on hand, ideas that yet need to be explored and much more.

Walt covers the electrophorus, his Roto-static generator, his bizarre "Cat-o-Static" generator, motor speed controls, external Van de Graaff generators, the classic internal Van de Graaff generator, ideas for an extremely high voltage Van de Graaff, inductive electrostatic generators, the Dirod generator, and more.

You'll find the equipment Walt has used to measure the voltages he has generated including his FET electroscope, neon lamp banks, spark gap volt meters, and more. Walt

LIGHTNING BOLT GENERATORS!

including high voltage test equipment, experiments, motors, more!

will show you how to build storage capacitors along with details of his successes and failures.

You get a list of interesting experiments to perform from something as simple as making your hair stand on end to building a "perpetual motion" machine. You'll learn about a variety of ion motors, ion blowers, the Franklin electrostatic motor, the Poggendorff Corona Motor, and even capturing free electrical energy from the atmosphere (Ben Franklin did this, and it almost killed him!) As a bonus Walt will show you how he electroplates

metal onto non-conducting forms to build low-loss high voltage terminals!

Walt is not a scientist nor a fantastic author. But he will clearly and humorously explain some of the crazy experiments he's tried and hopes you'll improve on. You get an easy-to-read text loaded with photos and drawings. You'll find that it's really quite easy to get started in electrostatics, and Walt's book will get you going! Excellent book! Worth having. Get a copy. 5 1/2 x 8 1/2 paperback 91 pages
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Early Machines!

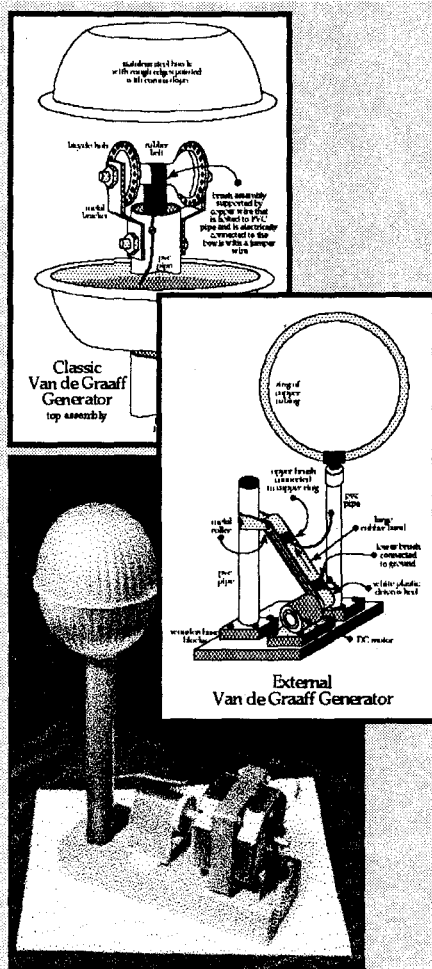
SILLIMAN'S ELECTRICAL MACHINES
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ment. Discover seven simple but entertaining experiments. Then investigate equipment to store electricity such as the Aepinus condenser, Volta's condensing electroscope, Dr. Hare's single gold leaf electrometer, the diamond jar, scintillating tube and magic squares, chemical experiments, Volta's lamp and more.

Another collection of rare static electricity information! Wood engravings like these haven't been produced in decades. Rare info! Get a copy. 5 1/2 x 8 1/2 booklet 24 pages
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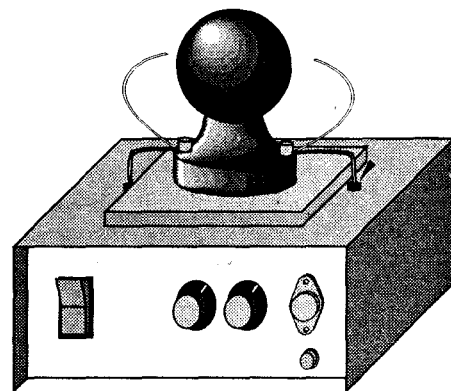


HOW TO BUILD A 40,000 VOLT INDUCTION COIL

by Walt Noon

Are you looking for a fast and simple way to generate high voltage? Try this.

The ignition coil in your automobile is the modern equivalent of an old time induction coil. It is nothing more than a transformer that converts low voltage into very high voltage. The points in your automobile replace the old fashioned spark gap. Every time the points open, a pulse of DC current hits the coil like a hammer hits a bell. The ignition coil "rings" like a bell and produces a burst of high voltage. If you "hit" the coil fast enough, the ringing seems to be continuous.



Build a 40,000 Volt Induction Coil

Walt Noon's circuit here replaces the spark gap and the points with a low cost solid state circuit centered around a 555 timer IC. The circuit takes 110 VAC out of your wall and converts it into a string of DC pulses. The pulses are sent to the terminals of an ignition coil that you can purchase at your local discount store. Off the high voltage terminal comes a solid 40,000 volts that can be used for a variety of experiments including plasma globes and Kirlian photography.

You get drawings of the unit, parts list, circuit diagram, photos and assembly instructions for the coil. You are expected to have at least some experience building modern electronic equipment with perf board. You get hints, tips and suggestions on where and how to make circuit modifications. You also get eight different experiments plus extensive details on Kirlian photography with a modified 35mm camera.

Get a copy of this and shock the pants of your friends. It's unusual and they will be amazed. Well written and to the point. Get a copy. 5 1/2 x 8 1/2 booklet 24 pages
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High Voltage!



An Experimenter's Introduction to VACUUM TECHNOLOGY by Steve Hansen

Get started in the world of high vacuum. Build projects that use simple mechanical vacuum pumps to produce vacuums that not truly high by modern standards, but much higher than you are acquainted with. After you learn what's here, you'll be ready to jump into the

Experimenter's Introduction to VACUUM TECHNOLOGY!

higher tech world of diffusion pumps and the like.

Chapters include means of producing vacuum, vacuum technology, materials, vacuum applications and pressure ranges, low cost mechanical pumps, simple gauges, useful flanges and connectors, a simple vacuum workstation, a manifold for gaseous discharge and electron beam experiments, experiments with glow discharge produced electron beams, the radiometer, a plasma sphere, Magdeburg hemispheres, along with lists of suppliers and references.

Take a refrigerator compressor and turn it into a vacuum pump. Build a glow discharge tube powered by a high voltage supply built from a modified TV flyback transformer. Make thermocouple gauges with op-amp controllers. Learn how to seal up equipment with o-rings, compression fittings, nylon washers, and more. Build a replica of a very early cathode ray tube, the Braun tube. Build a cold cathode CRT. Build a radiometer. Build a plasma sphere – one of those spheres with the dancing colored electric arcs that change when you bring your hand near. And you can always re-enact the famous Magdeburg sphere experiment of the 1600's.

These are reprinted articles from Hansen's newsletter "The Bell Jar". Each is clearly explained, illustrated, and is proved how-to using modern materials. Everything here is meat. No fluff. Get started in vacuum! Quality. Worth having. Get a copy. 8 1/2 x 11 booklet 39 pages

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THE TESLA HIGH FREQUENCY COIL Its Construction and Use by Haller & Cunningham reprinted by Lindsay Publications

What you get here is a reprint of a very rare 1910 Tesla coil construction book from 1910.

Chapters include general survey, the transformer, the condenser, the oscillation transformer, the interrupter, the construction of the boxes, assembling, theory of the coil, uses of the coil and dimensions of 7" standard coil.

First, you build your power transformer so that you can convert 110 volts to 10,000 volts. This iron wire cored devil is 18" long and 6" in diameter. Then you fabricate a monster condenser from 10"x12" sheets of glass and brass dipped in paraffin. The coil primary is 12" diameter while the secondary is 8" in diameter and 17" in length.

The chapter on interrupters is quite interesting because you are given options. You are shown the simple air-gap and the magnetic interrupter. Then you'll learn to build a motor-driven interrupter. In fact, the authors will show you how to build an electrolytic rectifier

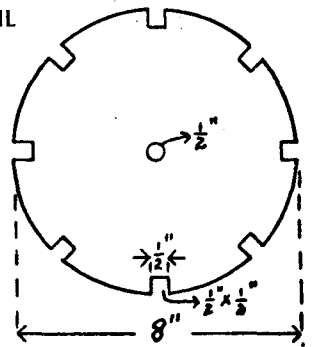
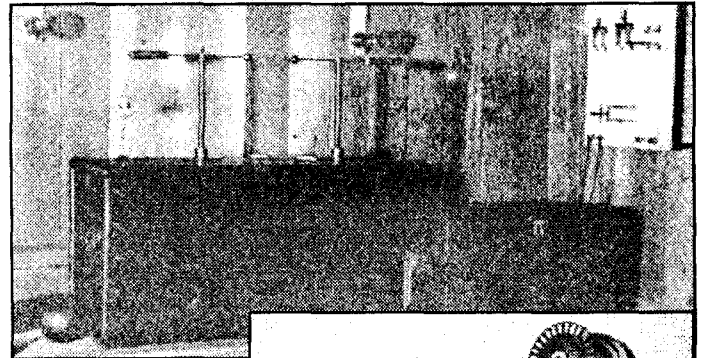


FIG. 8. — END SUPPORT FOR SECONDARY OF OSCILLATION TRANSFORMER.

Tesla High Frequency Coil Rare 1910 How-To Classic Back in Print!



so that you can use a DC motor rather than an induction motor.

The authors wrote this book to provide beginning experimenters with fool-proof plans so they could build a coil capable of generating 12" arcs. (A smaller 7" coil can be built that will provide 3" sparks.)

You get numerous photos and diagrams. Be warned, though, the photographs are "muddy" which is typical of the period. Nevertheless, you'll find this book to be well illustrated.

If you pride yourself on an extensive Tesla library, I'm going to tell you that it isn't anywhere near complete until you have a copy of this. This is a gem not only because it is how-to but because it is so rare. I feel lucky to have found it. I think you'll like it. Order a copy.

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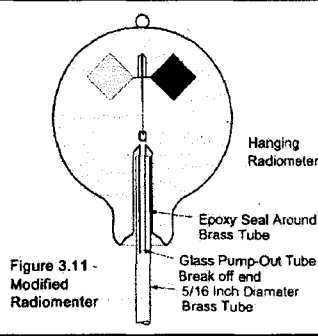


Figure 3.11 - Modified Radiometer

Construction of a Discharge Tube

The basic elements of a discharge tube are a glass tube (preferably borosilicate as the electrode regions can get hot), a pair of suitable electrodes, and an evacuation port for connection to the vacuum system. A very nice tube may be made using neon sign type electrodes with glass to metal seals. A demonstrable version made from a piece of chemical labware is shown in Figure 2.7. This might be considered to be overly complex, but this particular design also serves as a good example of the type of vacuum apparatus that may be made from standard laboratory glassware.

The tube is what is known as a chromatographic column, commonly used in analytical chemistry. This particular column has threaded ends which are compatible with a number of plug connectors and bushings. This connection system has been patented by Ace Glass and, at this point, such labware is only available from them. (However, they do sell the threaded ends so that any glassblower can fabricate customized pieces with these threads.) A wide variety of thread sizes and glassware shapes are available from Ace Glass and a well selected set of components may be combined into a wide variety of vacuum apparatus by the experimenter. Several projects in Section 3 of this booklet will make further use of Ace components.

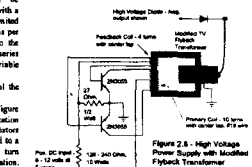
The particular tube is an 11 mm column, 1 foot in length, Ace casting number 5820-04. The nylon bushings are Ace casting #7706-02. Each bushing comes with an O-ring. The Ace components will cost about \$35.

One electrode is just a piece of 3/8" aluminum rod. The other electrode, which also serves as the evacuation port, is made from 1/4" old aluminum tubing. Aluminum is to be preferred over other common soft metals such as brass and copper as these metals tend to quickly deposit the electrode material on the wall of the tube through an ion bombardment process called sputtering. This coating of sputtered metal obscures the view of the discharge and will also lead to erratic operation as the coating is conductive. Stainless steel is an acceptable alternative.

Assembly consists of sliding each electrode through the nylon bushing and O-ring and then screwing the bushing into the end of the column. Finger tight will do it. Each electrode should project and lock in or so beyond the bushing. A piece of rubber or PVC hose with clamps completes the tube assembly.

The necessary high voltage may be supplied by an old oil burner transformer with a suitable rectifier circuit. These are common items at 5 to 20 mA and usually produce 5 kv rms per side (the secondaries are center tapped to the case). For a small tube such as this, a series resistance in the secondary or a variable transformer is the primary is advisable in order to control the current.

An alternative supply is shown in Figure 2.8. This is a fairly common implementation using a pair of general purpose 60Hz transformers to drive the 10 turn primary which is added to a surplus TV flyback transformer. A four turn feedback coil is required to sustain oscillation.



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High Voltage!

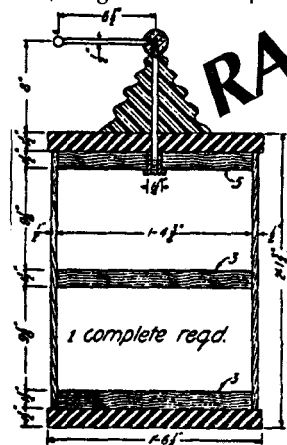


HIGH FREQUENCY APPARATUS

by Thomas Stanley Curtis
reprinted by
Lindsay Publications

By 1916 so much interest in induction, Tesla and Oudin coils had been generated by Electrician & Mechanic, Popular Electricity and Modern Mechanics, and The World's Advances magazines, that Curtis knew his book and high voltage equipment he manufactured would be a hit.

Because of their very nature, magazines could pub-



lish only brief articles on these lightning bolt generators. Curtis went the other extreme, and packed "Apparatus" with as much detailed information as he could find. Then he added suggestions for experiments and dozens of illustrations. The result is now a classic book, and original copies are so coveted that they're difficult to find.

You get wall-to-wall how-to on coil construction. Tips on calculating windings, winding coils, making transformers, interrupters and spark gaps, and even the power transformers that drive the spark gap.

If you want to die young, you can build an X-ray apparatus. Use it long enough, and you and everyone in your apartment building will glow in the dark!

Build a grid and see for yourself if high frequency current really does affect plant growth. Build yourself a large coil that produces 50" lightning bolts, give lectures, and make people think you are a genuine made scientist.

Great book. And absolutely MUST HAVE book for the Tesla coil experimenters. Get a copy for your high-voltage library. Quality. Order a copy today. 5 1/2 x 8 1/2 softcover 247 pages well illustrated No. 20030 \$12.95

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HIGH FREQUENCY APPARATUS

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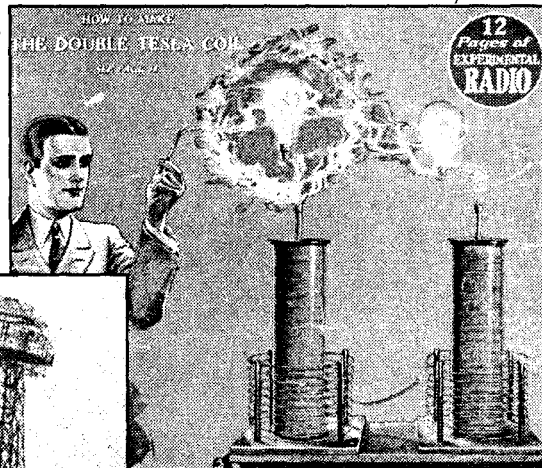
Rare Tesla Articles!

DOUBLE TESLA-LOUDIN COIL
reprinted by Lindsay Publications

Here, in one small booklet are five fascinating articles reprinted from the "The Experimenter" magazine and its derivatives of the World War I era.

The first article is entitled "Seeing the Unseen" and reveals one experimenter's construction of a double coil high voltage generator that was a cross between a Tesla coil and an Oudin coil. If you want to impress the devil out of someone with a blinding 20" bolt of lightning, this is the machine to build.

A single 2 kilowatt



transformer, spark gap and Leyden jar arrangement drives two sets of primary and secondary coils to generate the high voltage. I don't know where you'll get a 2 kw transformer with a 25,000 secondary, but you may be able to rewind the secondary of an existing transformer. The rest of the equipment appears to be straight forward. Reprinted from December 1925:

The second article is entitled "Wireless Transmission of Power Now Possible". Here, again, I don't believe it, but supposedly a British genius devised a way to transmit power into the ionosphere using air ionized by a power beam of light. It sounds much like a laser. March 1920.

"Home-Made Geisler Tubes" will show you how to make these neon-like tubes for use with high voltage equipment. You're shown the glass working technique, the hydrogen generator needed, and more. It sounds risky to me, but this is how it's done. Rare information!

After you build your lightning bolt generator, how are you going to brag about it if you don't know what the exact output voltage is? Or more importantly, how are you going to know if the new coil you've just built is actually better than the last? Or if the coil you are adjusting is getting "hotter"? "Testing High Voltages with Spark Gaps" is an article from 1917 that will show you how to build a very simple precision spark gap and use it to measure voltages up to 400,000 volts to within 2% accuracy as claimed by the American Institute of Electrical Engineers. It's a very simple device that when operated according to recommendations and used with supplied tables will reveal the voltage impressed upon it. Excellent article.

And the final article from March 1917 is entitled "U.S. Blows Up Tesla Radio Tower." You'll see photos of Tesla's long island radio tower collapsing from explosives. The unused tower was suspected of being used by spies to transmit information back to Germany.

This is a small booklet, but the information it contains is rare. The original text has been reset to make it much easier to read and all original illustrations have been retained. You may have read some of this in other Tesla books. These are the original articles. Valuable know-how. Great ideas. Order a copy! 5 1/2 x 8 1/2 booklet 23 pages No. 817 \$4.95



THE ODD INDEX The Ultimate Compendium of Bizarre and Unusual Facts by Stephen J Spignesi

Now here is something truly ridiculous and disgusting—something I know you have to have. It's just for fun, especially if you like vulgar humor.

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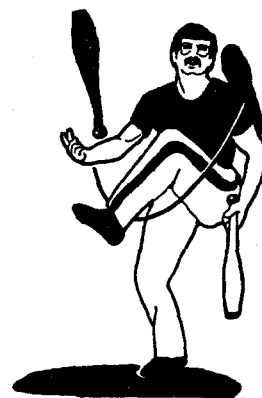
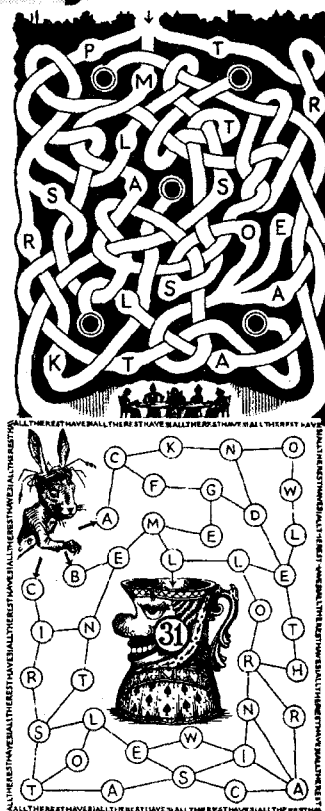
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by Dave Finnigan

This is an honest-to-goodness instruction manual that will teach you to juggle. It's small but most entertainers I've seen can't do much more than what's taught here. If you're out to prove to the rest of the neighborhood (or the guys down at the local pool hall) how truly bizarre you are, learn some of this stuff.

This is obviously heavily illustrated (201 drawings) in order to teach you clawing, two balls in one hand, juggler's tennis, the see saw, under the leg, behind the back, over the shoulder, english, body bounces, recoveries, running three, ring juggling, club juggling, and much more. You get guidelines from the greats, presentation, novelty routines in the public domain, showmanship and notes about plagiarism should you want to make some money.

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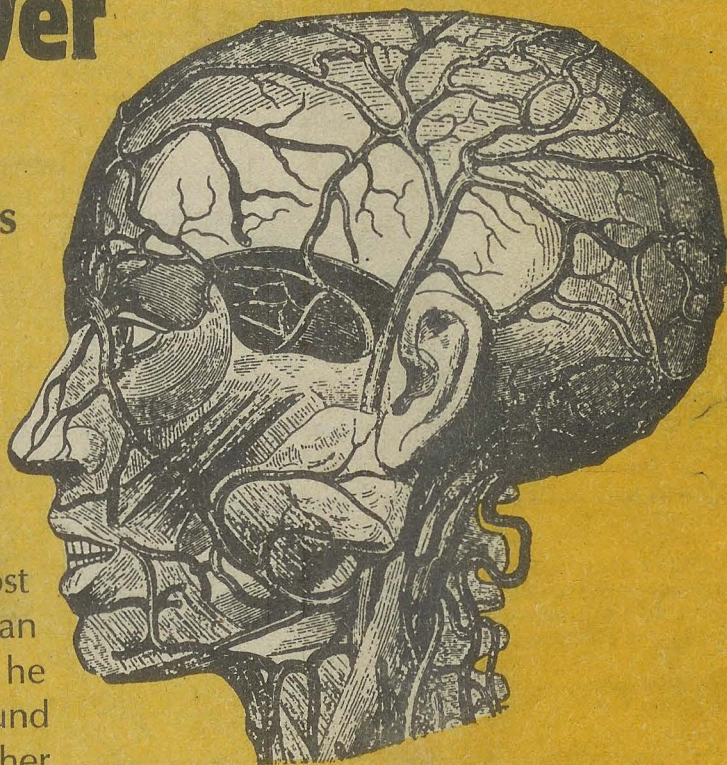
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